

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices



United States Department of Agriculture
Production and Marketing Administration

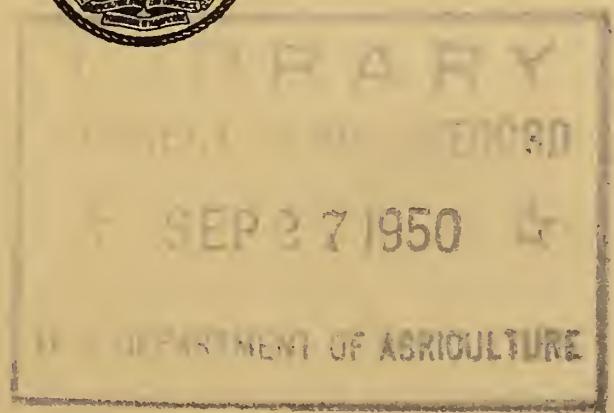
Service and Regulatory Announcements No. 156

**RULES AND REGULATIONS
UNDER THE FEDERAL SEED ACT**

**RULES AND REGULATIONS OF THE SECRETARY OF
AGRICULTURE AND JOINT RULES AND REGULATIONS
OF THE SECRETARY OF AGRICULTURE AND THE
SECRETARY OF THE TREASURY**

**FEDERAL SEED ACT OF AUGUST 9, 1939
(53 STAT. 1275)**

**Issued March 1940
Reprinted with amendments, July 1950**



United States Department of Agriculture

Production and Marketing Administration

SERVICE AND REGULATORY ANNOUNCEMENTS NO. 156

CONTENTS

	Page
Rules and Regulations of the Secretary of Agriculture under the Federal Seed Act-----	1
Joint Rules and Regulations of the Secretary of Agriculture and the Secretary of the Treasury for the enforcement of the Federal Seed Act of August 9, 1939-----	33
Federal Seed Act-----	39

RULES AND REGULATIONS OF THE SECRETARY OF AGRICULTURE UNDER THE FEDERAL SEED ACT

(Title 7, Ch. I, Pt. 201 of the Code of Federal Regulations)

CONTENTS

	Page
Definitions-----	2
201.1 Meaning of words-----	2
201.2 Terms defined-----	2
Administration-----	5
201.3 Administrator-----	5
Records for agricultural seeds-----	5
201.4 Maintenance and accessibility-----	5
201.5 Origin-----	5
201.6 Germination-----	5
201.7 Purity-----	6
Labeling agricultural seeds-----	6
201.8 Contents of the label-----	6
201.9 Kind-----	6
201.10 Variety-----	6
201.11 Type-----	6
201.12 Name of kind, variety, or type-----	6
201.13 Lot number or other identification-----	6
201.14 Origin-----	6
201.15 Weed seeds-----	7
201.16 Noxious-weed seeds-----	7
201.17 Noxious-weed seeds in the District of Columbia-----	7
201.18 Other agricultural seeds (crop seeds)-----	7
201.19 Inert matter-----	7
201.20 Germination-----	7
201.21 Hard seed-----	7
201.22 Date of test-----	7
201.23 Name of shipper or consignee-----	7
201.24 Code designation-----	7
Labeling vegetable seeds-----	7
201.25 Contents of the label-----	7
201.26 Kind and variety-----	7
201.27 Name of shipper or consignee-----	7
201.28 Code designation-----	7
201.29 Germination equal to or above standard-----	8
201.30 Germination below standard-----	8
201.31 Germination standards for vegetable seeds in interstate commerce-----	8
Labeling in general-----	8
201.32 Screenings-----	8
201.33 Seed for cleaning or processing-----	8
201.34 Kind, variety, or type of indistinguishable seeds-----	8
Blank spaces-----	8
The words "free" and "none"-----	8
Modifying statements-----	9
201.36a Disclaimers and nonwarranties-----	9
Advertising-----	9
201.36b Name of kind, variety, and type-----	9
Inspection-----	9
201.37 Authorization-----	9
201.38 Importations-----	9
Sampling in the administration of the act-----	9
201.39 General procedure-----	9
201.40 Bulk-----	9
201.41 Bags-----	9
201.42 Packets-----	9
201.43 Size of sample-----	9
201.44 Forwarding samples-----	9
Purity analysis in the administration of the act-----	10
201.45 Obtaining the working sample-----	10
201.46 Weight of working sample-----	10
201.47 Separation-----	13
201.48 Kind, variety, or type considered-----	13
201.49 Other crop seed-----	13
201.50 Weed seed-----	13
201.51 Inert matter-----	13
201.52 Noxious-weed seeds-----	14
Germination tests in the administration of the act-----	14
201.53 Source of seeds for germination-----	14
201.54 Number of seeds for germination-----	14
201.55 Retests-----	14
201.56 Interpretation-----	14
201.57 Hard seeds-----	14
201.58 Methods of testing for germination and hard seed-----	14

Page	Page		
Tolerances-----	22	Imported seed—Continued	Page
201.59 Application-----	22	201.109 Mixtures not considered adulterations-----	27
201.60 Purity percentages-----	22	Rules of practice-----	27
201.61 Germination-----	23	201.151 Institution of proceedings-----	27
201.62 Pure live seed-----	23	201.152 Status of applicant-----	27
201.63 Noxious-weed seeds in interstate commerce-----	23	201.153 Docket number-----	27
201.64 Noxious-weed seeds in imported seed-----	23	201.154 Cease and desist proceedings-----	27
201.64a Fluorescence test and 400- to 1,000-seed separations-----	24	201.155 Proceedings prior to reporting for criminal prosecution-----	30
Examinations in the administration of the act-----	24	Procedure as to hearings, publication, etc-----	31
201.65 Indistinguishable seed-----	24	201.156 Notice and hearing prior to promulgation of rules and regulations-----	31
201.66 Origin-----	25	201.157 Publication of judgments and orders-----	31
Imported seed-----	25	201.158 Proceedings under section 302 (a) to show cause why seed or screenings should be admitted into the United States-----	31
201.101 Exemptions-----	25	201.159 Proceedings under section 305 (b) to determine whether foreign alfalfa or red clover seed is not adapted for general agricultural use in the United States-----	31
201.102 Pure live seed-----	25		
201.103 Unadapted alfalfa and red clover-----	26		
201.104 Staining of imported seed-----	26		
201.105 Method of staining-----	26		
201.106 Supervision of staining-----	26		
201.107 Weed seeds-----	26		
201.108 Noxious-weed seeds-----	27		

DEFINITIONS

201.1 Meaning of words.—Words in these regulations in the singular form shall be deemed to import the plural, and vice versa, as the case may demand.

201.2 Terms defined.—When used in these regulations the terms as defined in section 101 of the act, unless modified in this section as provided in the act, shall apply with equal force and effect. In addition, as used in these rules and regulations:

(a) *The act.*—The term "act" means the Federal Seed Act, approved August 9, 1939 (53 Stat. 1275);

(b) *Person.*—The term "person" includes a partnership, corporation, company, society, association, receiver, or trustee;

(c) *Secretary.*—The term "Secretary" means the Secretary or Acting Secretary of Agriculture of the United States;

(d) *Hearing clerk.*—The term "Hearing clerk" means the hearing clerk, Office of the Solicitor, United States Department of Agriculture, Washington, D. C.;

(e) *Respondent.*—The term "respondent" means a person against whom a complaint is issued;

(f) *Examiner.*—The term "examiner" means an employee of the Department of Agriculture, designated by the Secretary to conduct hearings under the act, and the rules and regulations;

(g) *Federal Register.*—The term "Federal Register" means the publication provided by the act of July 26, 1935 (49 Stat. 500), and acts supplementary thereto and amendatory thereof;

(h) *Agricultural seeds.*—The term "agricultural seeds" means the following grass, forage, and field crop seeds:

Alfalfa— <i>Medicago sativa</i> L.	Bluestem:
Alfileria— <i>Erodium cicutarium</i> (L.) L'Her.	Big— <i>Andropogon furcatus</i> Muhl.
Bahia grass— <i>Paspalum notatum</i> Fluegge.	Little— <i>Andropogon scoparius</i> Michx.
Barley— <i>Hordeum vulgare</i> L.	Sand— <i>Andropogon hallii</i> Hack.
Beans:	Brome:
Adzuki— <i>Phaseolus angularis</i> Willd.	Mountain— <i>Bromus marginatus</i> Nees.
Field— <i>Phaseolus vulgaris</i> L.	Smooth— <i>Bromus inermis</i> Leyss.
Mung— <i>Phaseolus aureus</i> Roxb.	Broomcorn— <i>Sorghum vulgare</i> var. <i>technicum</i> (Koern.) Jav.
Velvet— <i>Stizolobium deeringianum</i> Bort.	Buckwheat— <i>Fagopyrum esculentum</i> Moench. (<i>F. vulgare</i> Hill.)
Beet, field, excluding sugar beet— <i>Beta vulgaris</i> L.	Buffalo grass— <i>Buchloe dactyloides</i> (Nutt.) Engl.
Beggarweed— <i>Desmodium tortuosum</i> (Sev.) DC.	Canary grass— <i>Phalaris canariensis</i> L.
Bentgrass:	Canary grass, reed— <i>Phalaris arundinacea</i> L.
Astoria, Colonial, Highland— <i>Agrostis tenuis</i> Sibth.	Carpet grass— <i>Axonopus affinis</i> Chase.
Creeping— <i>Agrostis palustris</i> Huds.	Chickpea— <i>Cicer arietinum</i> L.
Velvet— <i>Agrostis canina</i> L.	Clovers:
Bermuda grass— <i>Cynodon dactylon</i> (L.) Pers.	Alsike— <i>Trifolium hybridum</i> L.
Bluegrass:	Alyce— <i>Alysicarpus vaginalis</i> (L.) DC.
Annual— <i>Poa annua</i> L.	Berseem— <i>Trifolium alexandrinum</i> L.
Bulbous— <i>Poa bulbosa</i> L.	Bur— <i>Medicago hispida</i> Gaertn.
Canada— <i>Poa compressa</i> L.	Bur, spotted— <i>Medicago arabica</i> (L.) All.
Kentucky— <i>Poa pratensis</i> L.	Cluster— <i>Trifolium glomeratum</i> L.
Nevada— <i>Poa nevadensis</i> Vasey.	Crimson— <i>Trifolium incarnatum</i> L.
Rough— <i>Poa trivialis</i> L.	Ladino— <i>Trifolium repens</i> L.
Texas— <i>Poa arachnifera</i> Torr.	Lappa— <i>Trifolium lappaceum</i> L.
Wood— <i>Poa nemoralis</i> L.	

Bluestem:	
Big— <i>Andropogon furcatus</i> Muhl.	
Little— <i>Andropogon scoparius</i> Michx.	
Sand— <i>Andropogon hallii</i> Hack.	
Brome:	
Mountain— <i>Bromus marginatus</i> Nees.	
Smooth— <i>Bromus inermis</i> Leyss.	
Broomcorn— <i>Sorghum vulgare</i> var. <i>technicum</i> (Koern.) Jav.	
Buckwheat— <i>Fagopyrum esculentum</i> Moench. (<i>F. vulgare</i> Hill.)	
Buffalo grass— <i>Buchloe dactyloides</i> (Nutt.) Engl.	
Canary grass— <i>Phalaris canariensis</i> L.	
Canary grass, reed— <i>Phalaris arundinacea</i> L.	
Carpet grass— <i>Axonopus affinis</i> Chase.	
Chickpea— <i>Cicer arietinum</i> L.	
Clovers:	
Alsike— <i>Trifolium hybridum</i> L.	
Alyce— <i>Alysicarpus vaginalis</i> (L.) DC.	
Berseem— <i>Trifolium alexandrinum</i> L.	
Bur— <i>Medicago hispida</i> Gaertn.	
Bur, spotted— <i>Medicago arabica</i> (L.) All.	
Cluster— <i>Trifolium glomeratum</i> L.	
Crimson— <i>Trifolium incarnatum</i> L.	
Ladino— <i>Trifolium repens</i> L.	
Lappa— <i>Trifolium lappaceum</i> L.	

Clovers—Continued

Large hop—*Trifolium procumbens* L.
 Persian—*Trifolium resupinatum* L.
 Red—*Trifolium pratense* L.
 Sour—*Melilotus indica* (L.) All.
 Strawberry—*Trifolium fragiferum* L.
 Sub (Subterranean)—*Trifolium subterraneum* L.
 Suckling (small hop)—*Trifolium dubium* Sibth.
 Sweet:
 Yellow—*Melilotus officinalis* (L.) Lam.
 White—*Melilotus alba* Desr.
 White—*Trifolium repens* L.

Corn:

Field—*Zea mays* L.
 Pop—*Zea mays* var. *evera* (Sturt.) Bailey.

Cotton—*Gossypium* spp.Cowpea—*Vigna sinensis* (Torner) Savi.Crested dogtail—*Cynosurus cristatus* L.

Crotalaria:

Crotalaria—*Crotalaria intermedia* Kotschy.
 Crotalaria—*Crotalaria spectabilis* Roth.
 Lance—*Crotalaria lanceolata* E. Mey.
 Striata—*Crotalaria striata* DC.

Sunn—*Crotalaria juncea* L.

Dallis grass—*Paspalum dilatatum* Poir.Dropseed, sand—*Sporobolus cryptandrus* (Torr.) A. Gray.

Fescue:

Chewings—*Festuca rubra* var. *commutata* Gaud.
 Hair—*Festuca capillata*, Lam.
 Meadow—*Festuca elatior* L.
 Red—*Festuca rubra* L.
 Sheep—*Festuca ovina* L.
 Tall—*Festuca arundinacea* Schreb.

Flax—*Linum usitatissimum* L.

Gram:

Blue—*Bouteloua gracilis* (H. B. K.) Lag.
 Side-oats—*Bouteloua curtipendula* (Michx.) Torr.

Guinea grass—*Panicum maximum* Jacq.
 Harding grass—*Phalaris tuberosa* var. *stenoptera* (Hack.) Hitchc.Hemp—*Cannabis sativa* L.Indian grass, yellow—*Sorghastrum nutans* (L.) Nash.Japanese lawn grass—*Zoysia japonica* Steud.Johnson grass—*Sorghum halepense* (L.) Pers.Kudzu—*Pueraria thunbergiana* (Sieb. and Zucc.) Benth.

Lespedeza:

Common and Kobe—*Lespedeza striata* (Thunb.) Hook. and Arn.
 Korean—*Lespedeza stipulacea* Maxim.
 Sericea or Chinese—*Lespedeza cuneata* (Dumont) D. Don. [*L. sericea* (Thunb.) Miq.].

Siberian—*Lespedeza hedysaroides* (Pallas) Ricker

Lovegrass, weeping—*Eragrostis curvula* (Schrad.) Nees.Lupine—*Lupinus* spp. (other than ornamental).Manila grass—*Zoysia matrella* (L.) Merr.Meadow foxtail—*Alopecurus pratensis* L.Medick, black—*Medicago lupulina* L.

Millet:

Browntop—*Panicum fasciculatum* Swartz.
 Foxtail (German, Hungarian, or golden)—*Setaria italica* (L.) Beauv.
 Japanese—*Echinochloa crusgalli* var. *frumentacea* (Roxb.) Wight.

(i) *Vegetable seeds.*—The term “vegetable seeds” means the seeds of the following crops that are or may be grown in gardens or on truck farms and are or may be generally known and sold under the name of vegetable seeds:

Artichoke—*Cynara scolymus* L.Asparagus—*Asparagus officinalis* L.

Beans:

Asparagus—*Vigna sesquipedalis* (L.) Fruwirth.

Garden—*Phaseolus vulgaris* L.

Horse or broad—*Vicia faba* L.

Lima—*Phaseolus lunatus* var. *macrocarpus* Van Eseltine.

Runner—*Phaseolus coccineus* L.

Beet—*Beta vulgaris* L.Broccoli—*Brassica oleracea* var. *botrytis* L.Brussels sprouts—*Brassica oleracea* var. *gemmifera* Zenker.Cabbage—*Brassica oleracea* var. *capitata* L.Cardoon—*Cynara cardunculus* L.

Millet—Continued

Pearl—*Pennisetum glaucum* (L.) R. Br.

Proso—*Panicum miliaceum* L.

Molasses grass—*Melinis minutiflora* Beauv.

Mustard:

Black—*Brassica nigra* Koch.

White—*Brassica hirta* Moench.

Napier grass—*Pennisetum purpureum* Schumach.

Oat—*Avena* spp.

Oatgrass, tall—*Arrhenatherum elatius* (L.) Mert. and Koch.

Orchard grass—*Dactylis glomerata* L.

Panic grass, blue—*Panicum antidotale* Retz.

Peanut—*Arachis hypogaea* L.

Pea, field—*Pisum sativum* var. *arvense* (L.) Poir.

Rape:

Annual—*Brassica napus* var. *annua* Koch.

Bird—*Brassica campestris* L.

Turnip—*Brassica campestris* vars. L.

Winter—*Brassica napus* var. *biennis* (Schubl. and Mart.) Reichb.

Redtop—*Agrostis alba* L.

Rescue grass—*Bromus catharticus* Vahl.

Rhodes grass—*Chloris gayana* Kunth.

Rice—*Oryza sativa* L.

Ricegrass, Indian—*Oryzopsis hymenoides* (Roem. and Schult.) Ricker.

Rough pea—*Lathyrus hirsutus* L.

Rye—*Secale cereale* L.

Ryegrass:

Italian—*Lolium multiflorum* Lam.

Perennial—*Lolium perenne* L.

Sainfoin—*Onobrychis viciaefolia* Scop.

Sesbania—*Sesbania exaltata* (Raf.) Torr.

Smilo—*Oryzopsis miliacea* (L.) Benth. and Hook.

Sorghum—*Sorghum vulgare* Pers.

Soybean—*Glycine max* (L.) Merrill [*Soja max* (L.) Piper].

Sudan grass—*Sorghum vulgare* var. *sudanense* (Piper) Hitchc.

Sunflower (cultivated)—*Helianthus annuus* L.

Sweet vernalgrass—*Anthoxanthum odoratum* L.

Switch grass—*Panicum virgatum* L.

Timothy—*Phleum pratense* L.

Trefoil, big—*Lotus uliginosus* Schkuhr.

Trefoil, birdsfoot—*Lotus corniculatus* L.

Vasey grass—*Paspalum urvillei* Steud.

Velvet grass—*Holcus lanatus* L.

Vetch:

Common—*Vicia sativa* L.

Hairy—*Vicia villosa* Roth.

Hungarian—*Vicia pannonica* Crantz.

Monantha—*Vicia articulata* Hornem. (*V. monantha* Desf.).

Narrowleaf—*Vicia angustifolia* (L.) Reich.

Purple—*Vicia atropurpurea* Desf.

Woollypod—*Vicia dasycarpa* Ten.

Wheat; spelt; emmer—*Triticum* spp.

Wheatgrass:

Crested—*Agropyron cristatum* (L.) Beauv.

Slender—*Agropyron pauciflorum* (Schwein.) Hitchc. (*A. trachycaulum* Steud.).

Western (Bluestem)—*Agropyron smithii* Rydb.

Wild-rye, Canada—*Elymus canadensis* L.

Carrot (cultivated)—*Daucus carota* L.

Cauliflower—*Brassica oleracea* var. *botrytis* L.

Celeriac—*Apium graveolens* var. *rapaceum* DC.

Celery—*Apium graveolens* var. *dulce* (Mill.) Pers.

Chicory—*Cichorium intybus* L.

Citron (melon)—*Citrullus vulgaris* Schrad.

Collards—*Brassica oleracea* var. *acephala* DC.

Corn, sweet—*Zea mays* L.

Cornsalad—(Fetticus)—*Valerianella locusta* var. *olitoria* Pall.

Cowpea—*Vigna sinensis* (Torner) Savi.

Cress:

Garden—*Lepidium sativum* L.

Water—*Rorippa nasturtium-aquaticum* (L.) Britt. and Rendle.

Cucumber— <i>Cucumis sativus</i> L.	Pe-tsai or Chinese cabbage— <i>Brassica pekinensis</i> (Lour.) Rupr.
Dandelion— <i>Taraxacum officinale</i> Weber.	Pumpkin— <i>Cucurbita pepo</i> L.
Eggplant— <i>Solanum melongena</i> var. <i>esculentum</i> Nees.	Radish— <i>Raphanus sativus</i> L.
Endive— <i>Cichorium endivia</i> L.	Rhubarb— <i>Rheum rhaboticum</i> L.
Kale— <i>Brassica oleracea</i> var. <i>acephala</i> DC.	Rutabaga— <i>Brassica napus</i> var. <i>napobrassica</i> (L.) Reichb.
Kohlrabi— <i>Brassica oleracea</i> var. <i>gongylodes</i> L.	Salsify— <i>Tragopogon porrifolius</i> L.
Leek— <i>Allium porrum</i> L.	Sorrel (cultivated)— <i>Rumex acetosa</i> L.
Lettuce— <i>Lactuca sativa</i> L.	Soybean— <i>Glycine max</i> (L.) Merrill [<i>Soja max</i> (L.) <i>Piper</i>].
Muskmelon— <i>Cucumis melo</i> L.	Spinach— <i>Spinacia oleracea</i> L.
Mustard:	Spinach—New Zealand— <i>Tetragonia expansa</i> Thunb.
(Cultivated)— <i>Brassica juncea</i> (L.) Coss.	Squash— <i>Cucurbita moschata</i> Duchesne and <i>C. maxima</i> Duchesne.
Spinach— <i>Brassica perviridis</i> Bailey.	Swiss chard— <i>Beta vulgaris</i> var. <i>cicla</i> L.
Vegetable— <i>Brassica</i> spp.	Tomato— <i>Lycopersicon esculentum</i> Mill.
Okra— <i>Hibiscus esculentus</i> L.	Tomato, Husk— <i>Physalis pubescens</i> L.
Onion— <i>Allium cepa</i> L.	Turnip— <i>Brassica rapa</i> L.
Pak-choi— <i>Brassica chinensis</i> L.	Watermelon— <i>Citrullus vulgaris</i> Schrad.
Parsley— <i>Petroselinum hortense</i> Hoffm.	
Parsnip (cultivated)— <i>Pastinaca sativa</i> L.	
Peas, garden— <i>Pisum sativum</i> L.	
Pepper— <i>Capsicum</i> spp.	

(j) *Regulations.*—The term "regulations" means the rules and regulations promulgated by the Secretary of Agriculture and the joint rules and regulations promulgated by the Secretary of the Treasury and the Secretary of Agriculture under the act.

(k) *Joint regulations.*—The term "joint regulations" means the joint rules and regulations promulgated by the Secretary of the Treasury and the Secretary of Agriculture.

(l) *Complete record.*—The term "complete record" means information which relates to the origin, germination, or purity of each lot of agricultural seed handled. Such information includes declarations, labels, seed samples, records of purchases and sales, cleaning and bulking, handling, storage, analyses, tests, and examinations pertaining to the origin, germination, or purity of any lot of seed.

The complete record kept by each person for each lot of seed consists of the information pertaining to his own transactions, and the information received pertaining to each lot of seed handled. The record shall be kept in such manner as to permit comparison with the records kept by other persons for the same lot of seed, so that the origin, germination, or purity may be traced from the grower to the ultimate consumer, and so that the lot of seed may be correctly labeled.

(m) *Declaration.*—The term "declaration" means a written statement of a grower, shipper, processor, dealer, or importer giving for any lot of seed the kind, variety, type, origin, or the use for which the seed is intended.

(n) *Declaration of origin.*—The term "declaration of origin" means a declaration of a grower or country shipper in the United States stating for each lot of agricultural seed (a) kind of seed, (b) lot number or other identification, (c) State where seed was grown and the county where grown if to be labeled showing the origin as a portion of a State, (d) quantity of seed, (e) date shipped or delivered, (f) to whom sold, shipped, or delivered, and (g) the signature and address of the grower or country shipper issuing the declaration. If the declaration is issued by a grower and the identity of the person delivering the seed is unknown to the receiver, the motor-vehicle license number or other identification of the delivering agency should be entered on the declaration by the receiver. If a country shipper's declaration includes seed shipped or delivered to him by another country shipper, it shall give for each lot the other country shipper's lot number as included in the other country shipper's declaration of origin.

(o) *Declaration of kind, variety, or type.*—The term "declaration of kind, variety, or type" means a declaration of a grower stating for each lot of seed (a) the name of the kind, variety, or type stated in accordance with sections 201.9 to 201.12, (b) lot number or other identification, (c) place where seed was grown, (d) quantity of seed, (e) date shipped or delivered, (f) to whom sold, shipped, or delivered, and (g) the signature and address of the grower issuing the declaration.

(p) *Mixture.*—The term "mixture" means seeds consisting of more than one kind or variety, each present in excess of 5 percent of the whole.

(q) *Handling seed.*—The term "handling seed" includes transportation, warehousing, cleaning, processing, merchandising, labeling, and any other operation connected with the handling of seed in the seed business.

(r) *Grower.*—The term "grower" means any person who produces directly or through a growing contract, or is a seed-crop sharer in seed which is sold, offered for sale, transported, or offered for transportation.

(s) *Country shipper.*—The term "country shipper" means any person located in

a producing area who purchases seed locally for shipment to seed dealers or to other country shippers.

(t) *Dealer*.—The term "dealer" means any person who cleans, processes, sells, offers for sale, transports, or delivers for transportation seeds in interstate commerce.

(u) *Consumer*.—The term "consumer" means any person who purchases or otherwise obtains seed for sowing but not for resale.

(v) *Lot of seed*.—The term "lot of seed" means a definite quantity of seed identified by a lot number, every portion or bag of which is uniform, within permitted tolerances, for the factors which appear in the labeling.

(w) *Purity*.—The term "purity" means the name or names of the kind, type, or variety and the percentage or percentages thereof; the percentage of other agricultural seed or crop seed; the percentage of weed seeds, including noxious-weed seeds; the percentage of inert matter; and the names of the noxious-weed seeds and the rate of occurrence of each.

(x) *Certified seed or registered seed*.—The terms "certified seed" and "registered seed" mean seed that has been produced and labeled in accordance with the procedures and in compliance with the rules and regulations of an officially recognized seed-certifying agency.

(y) *Hybrid seed corn*.—The term "hybrid seed corn" means the first-generation seed of a cross produced by controlling the pollination, and by combining two, three, or four inbred lines, or by combining one inbred line or a single cross with an open-pollinated variety. Hybrid designations shall be treated as variety names.

(z) *Processing*.—For the purpose of section 203 (b) (2) (B) of the act the term "processing" means cleaning, scarifying, or blending to obtain uniform quality, and other operations which would change the purity or germination of the seed and therefore require retesting to determine the quality of the seed, but does not include operations such as packaging, labeling, blending together of uniform lots of the same kind or variety without cleaning, or the preparation of a mixture without cleaning, any of which would not require retesting to determine the quality of the seed.

ADMINISTRATION

201.3 Administrator.—The Administrator of the Production and Marketing Administration shall perform such duties as the Secretary may require in enforcing the provisions of the act and of the regulations in this part.

RECORDS FOR AGRICULTURAL SEEDS

201.4 Maintenance and accessibility.—Each person handling agricultural seed subject to the act shall keep for a period of 3 years a complete record of each lot of agricultural seed handled, except that any seed sample may be discarded 1 year after the entire lot represented by such sample has been disposed of by such person. Each person shall retain a sample representing each lot of agricultural seed shipped by him in interstate commerce, and shall retain such additional samples as are required by the regulations. Each sample retained shall be at least the weight required for a noxious-weed seed examination as set forth in section 201.46. The record shall be accessible for inspection by the authorized agents of the Secretary in connection with the administration of the act at any time during customary business hours.

201.5 Origin.—The complete record for any lot of seed of alfalfa, red clover, or field corn, except hybrid seed corn, shall include a declaration of origin, or information traceable to a declaration of origin or evidence showing that a declaration of origin could not be obtained.

Each country shipper shall retain a copy of each declaration which he issues and shall attach thereto a detailed record showing the names and addresses of growers or country shippers from whom the seed was purchased, the quantity of seed purchased from each, and the date on which it was delivered to him.

Each country shipper shall retain a sample of each lot of seed not produced locally and which is covered by a declaration of origin. Each dealer shall retain a sample of each lot of seed purchased directly from a grower when such seed is covered by a declaration of origin and has not been produced in the vicinity of the dealer's place of business.

201.6 Germination.—The complete record shall include the records of all laboratory tests for germination and hard seed for each lot of seed offered for

transportation in whole or in part. The record shall show the kind of seed, lot number, date of test, percentage of germination and hard seeds, and such other information as may be necessary to show the method used.

201.7 Purity.—The complete record for any lot of seed shall include (a) records of analyses, tests, and examinations including statements of weed seeds, noxious-weed seeds, inert matter, other agricultural seeds, and of any determinations of kind, variety, or type and a description of the methods used; and (b) for seeds indistinguishable by seed characteristics, records necessary to disclose the kind, variety, or type, including a grower's declaration of kind, variety, or type, and a representative sample of the seed received from the grower. The grower's declaration and the sample shall be obtained and kept by the person procuring the seed from the grower.

LABELING AGRICULTURAL SEEDS

201.8 Contents of the label.—The label shall contain the required information in any form that is clearly legible. The information may be on a tag attached securely to the container, or may be printed in a conspicuous manner on a side or the top of the container. The information required for labeling seed in bulk shall appear in the invoice. The label may contain information in addition to that required by the act, provided such information is not misleading.

201.9 Kind.—The name of each kind of seed present in excess of 5 percent shall be shown on the label and need not be accompanied by the word "kind." When two or more kinds of seed are named on the label, the name of each kind shall be accompanied by the percentage of each. When only one kind of seed is present in excess of 5 percent and no variety name or type designation is shown, the percentage of that kind may be shown as "pure seed" and such percentage shall apply only to seed of the kind named.

201.10 Variety.—If the name of the variety is given, the name may be associated with the name of the kind with or without the words "kind and variety." The percentage in such case, which may be shown as "pure seed," shall apply only to seed of the variety named. If separate percentages for the kind and the variety are shown, the name of the kind and the name of the variety shall be clearly associated with the respective percentages. When two or more varieties are present in excess of 5 percent and are named on the label, the name of each variety shall be accompanied by the percentage of each.

201.11 Type.—When type is designated, such designation may be associated with the name of the kind but shall in all cases be clearly associated with the word "type." The percentage, which may be shown as "pure seed," shall apply only to the type designated. If separate percentages for the kind and the type are shown, such percentages shall be clearly associated with the name of the kind and the name of the type.

If the type designation does not include a variety name, it shall include a name descriptive of a group of varieties of similar character and the pure seed shall be at least 90 percent of one or more varieties all of which conform to the type designation.

If the name of a variety is used as a part of the type designation, the seed shall be of that variety and may contain: (1) An admixture of seed of other indistinguishable varieties of the same kind and of similar character; or, (2) an admixture of indistinguishable seeds having genetic characteristics dissimilar to the variety named by reason of cross-fertilization with other varieties. In either case, at least 90 percent of the pure seed shall be of the variety named or upon growth shall produce plants having characteristics similar to the variety named.

201.12 Name of kind, variety, or type.—The representation of kind, variety, or type shall be confined to the recognized name of the kind, variety, or type. It shall not have affixed thereto names or terms that create a misleading impression as to the history or quality of the seed.

201.13 Lot number or other identification.—The lot number or other identification shall be shown on the label and shall be the same as that used in the records pertaining to the same lot of seed.

201.14 Origin.—Alfalfa, red clover, and field corn (except hybrid seed corn) shall be labeled to show: (1) The origin, if known; or (2) if the origin is not known, the statement "origin unknown."

Whenever such seed originates in more than one State, the name of each State and the percentage of seed originating in each State shall be given in the order of its predominance. Whenever such seed originates in a portion of a State, it shall be permissible to label such seed as originating in such portion of a State.

Proper precautions to insure that the origin of seed is known shall include the maintaining of a record as described in section 201.5. The examination of the seed and any pertinent facts may be taken into consideration in determining whether proper precautions have been taken to insure the origin to be that which is represented.

201.15 Weed seeds.—The percentage of weed seeds shall include seeds of plants considered weeds in the State into which the seed is offered for transportation or transported and shall include noxious-weed seeds.

201.16 Noxious-weed seeds.—The names of the kinds of noxious-weed seeds and the rate of occurrence of each shall be expressed in the label in accordance with, and the rate of occurrence shall not exceed the rate permitted by, the law and regulations of the State into which the seed is offered for transportation or is transported.

201.17 Noxious-weed seeds in the District of Columbia.—Noxious-weed seeds in the District of Columbia are: Quackgrass (*Agropyron repens*), Canada thistle (*Cirsium arvense*), bindweed (*Convolvulus arvensis*), Bermuda grass (*Cynodon dactylon*), and wild onion bulblets (*Allium vineale*). The name and number per ounce of each kind of such noxious-weed seeds present shall be shown on the label.

201.18 Other agricultural seeds (crop seeds).—Agricultural seeds other than those included in the percentage or percentages of kind, variety, or type may be expressed as "crop seeds" or "other crop seeds," but the percentage shall include collectively all kinds, varieties, or types not named upon the label.

201.19 Inert matter.—The label shall show the percentage by weight of inert matter.

201.20 Germination.—The label shall show the percentage of germination for each agricultural seed present in excess of 5 percent.

201.21 Hard seed.—The label shall show the percentage of hard seed, if any is present, and the percentage of hard seed shall not be included as part of the germination percentage.

201.22 Date of test.—The label shall show the month and year in which the germination test was completed. No more than 5 calendar months shall have elapsed between the last day of the month in which the germination test was completed and the date of transportation or delivery for transportation in interstate commerce.

201.23 Name of shipper or consignee.—The full name and address of either the shipper or consignee shall appear upon the label. If the name and address of the shipper are not shown upon the label, a code designation identifying the shipper shall be shown.

201.24 Code designation.—The code designation used in lieu of the full name and address of the person who transports or delivers seed for transportation in interstate commerce shall be approved by the Assistant Administrator for Regulatory and Marketing Service Work, Production and Marketing Administration, or such other person as may be designated by him for the purpose. When used, the code designation shall appear on the label in a clear and legible manner.

LABELING VEGETABLE SEEDS

201.25 Contents of the label.—Vegetable seed in packets and in larger containers shall be labeled with the required information in any form that is clearly legible. Any tag used shall be securely attached to the container. The label may contain information in addition to that required by the act, provided such information is not misleading.

201.26 Kind and variety.—The label or the face of the container shall bear the name of the kind and variety of the seed. The representation of kind and variety shall be confined to the recognized name of the kind and variety. It shall not have affixed thereto names or terms that create a misleading impression as to the history or quality of the seed.

201.27 Name of shipper or consignee.—The full name and address of either the shipper, or consignee, shall appear upon the label except that if the name and address of the shipper are not shown, a code designation identifying the shipper shall be shown.

201.28 Code designation.—The code designation used in lieu of the full name and address of the person who transports or delivers seed for transportation in interstate commerce shall be approved by the Assistant Administrator for Regulatory and Marketing Service Work, Production and Marketing Administration, or such other person as may be designated by him for the purpose. When used, the code designation shall appear on the label in a clear and legible manner.

201.29 Germination equal to or above standard.—Vegetable seeds which have a germination equal to or better than the standard set forth in section 201.31, need not bear a statement showing the percentage of germination.

201.30 Germination below standard.—Vegetable seeds which have a germination percentage less than the standard set forth in section 201.31 shall have the words "Below Standard," clearly shown in a conspicuous place on the label or on the face of the container, in type no smaller than 8 point. The seed shall also be labeled to show the percentage of germination and the percentage of any hard seed present and the month and year in which the germination test was completed. The percentage of hard seed shall not be included in the percentage of germination. No more than 5 calendar months shall have elapsed between the last day of the month in which the germination test was completed and the date of transportation or delivery for transportation in interstate commerce.

201.31 Germination standards for vegetable seeds in interstate commerce.—The following germination standards for vegetable seeds in interstate commerce, which shall be construed to include hard seed, are determined and established under section 403 (c) of the act:

	Percent		Percent
Artichoke	60	Kohlrabi	75
Asparagus	70	Leek	60
Beans, asparagus	75	Lettuce	80
Beans, garden (varieties other than Rival, Top-crop, and Logan)	75	Muskmelon	75
Beans, garden (varieties Rival, Topcrop, and Logan)	70	Mustard	75
Beans, horse or broad	75	Mustard, spinach	75
Beans, lima	70	Mustard, vegetable	75
Beans, runner	75	Okra	50
Beets	65	Onion	70
Broccoli	75	Pak-choi	75
Brussels sprouts	70	Parsley	60
Cabbage	75	Parsnip	60
Cardoon	60	Peas	80
Carrot	55	Pepper	55
Cauliflower	75	Pe-tsai or Chinese cabbage	75
Celery and celeriac	55	Pumpkin	75
Chicory	65	Radish	75
Citron	65	Rhubarb	60
Collards	80	Rutabaga	75
Corn	75	Salsify	75
Cornsalad (Fetticus)	70	Sorrel	60
Cowpea	75	Soybean	75
Cress, garden	60	Spinach (except New Zealand)	60
Cress, water	40	Spinach, New Zealand	40
Cucumber	80	Squash	75
Dandelion	45	Swiss chard	65
Eggplant	60	Tomato	75
Endive	70	Tomato, husk	50
Kale	75	Turnip	80
		Watermelon	70

LABELING IN GENERAL

201.32 Screenings.—Screenings shipped in interstate commerce, if in containers, shall be labeled in a legible manner with letters not smaller than 18 point type and, if in bulk, shall be invoiced with the words "Screenings for processing—not for seeding."

201.33 Seed for cleaning or processing.—Seed transported to a seed-cleaning or processing establishment for cleaning or processing, if in bulk, shall be invoiced, or if in bags, shall be labeled with the words "Seed for processing." If such seed is covered by a declaration of origin, kind, variety, or type, the lot designation appearing in the declaration shall be placed on the invoice, if the seed is in bulk, or on the label if the seed is in containers.

201.34 Kind, variety, or type of indistinguishable seeds. Proper precautions to insure that the kind or variety or type of indistinguishable agricultural or vegetable seeds is properly stated shall include the maintaining of the records described in section 201.7. The examination of the seed and any pertinent facts may be taken into consideration in determining whether proper precautions have been taken to insure the kind, variety, or type to be that which is shown.

201.35 Blank spaces.—Blank spaces on the label shall be deemed to imply the word "None," when such interpretation is reasonable.

201.36 The words "free" and "none." The words "free" and "none" shall be construed to mean that none were found in a test complying with the methods set forth in sections 201.45 to 201.52.

MODIFYING STATEMENTS

201.36a Disclaimers and nonwarranties.—A disclaimer, nonwarranty, or limited warranty used in any invoice or other labeling, or advertisement shall not directly or indirectly deny or modify any information required by the act or the regulations in this part.

ADVERTISING

201.36b Name of kind, variety, and type.—The representation of the name of a kind, variety, or type of seed in any advertisement subject to the act shall be confined to the recognized name of the kind, variety, or type. It shall not include names or terms that create a misleading impression as to the history or quality of the seed.

INSPECTION

201.37 Authorization. When authorized by the Administrator of the Production and Marketing Administration, or by such other person as may be designated for the purpose, Federal employees and qualified State officials, for the purposes of the act, may draw samples of, secure information and inspect records pertaining to, and otherwise inspect seeds and screenings subject to the act.

201.38 Importations.—Prior to release into the commerce of the United States, imported seed and screenings shall be inspected as provided in sections 201.208 and 201.209.

SAMPLING IN THE ADMINISTRATION OF THE ACT

201.39 General procedure.—(a) In order to secure a representative sample, equal portions shall be taken from evenly distributed parts of the quantity of seed or screenings to be sampled. Access shall be had to all parts of that quantity.

(b) For free-flowing seed in bags or bulk, a probe or trier shall be used. For small free-flowing seed in bags a probe or trier long enough to sample all portions of the bag should be used.

(c) Non-free-flowing seed, such as certain grass seed, uncleaned seed or screenings, difficult to sample with a probe or trier, shall be sampled by thrusting the hand into the bulk and withdrawing representative portions.

(d) As the seed or screenings are sampled each portion shall be examined and if there appears to be a lack of uniformity, the portions shall not be combined but shall be retained as separate samples to determine such lack of uniformity as may exist.

(e) When the portions appear to be uniform, they shall be combined to form a composite sample.

201.40 Bulk.—Bulk seeds or screenings shall be sampled by inserting a long probe or thrusting the hand into the bulk as circumstances require in at least seven uniformly distributed parts of the quantity being sampled.

201.41 Bags.—(a) In quantities of five bags or less each bag shall be sampled.

(b) In quantities of more than five bags, at least every fifth bag but not less than five bags shall be sampled.

(c) Samples shall be drawn from unopened bags except under circumstances where the identity of the seed has been preserved.

201.42 Packets.—In sampling seed in packets, entire unopened packets shall be taken.

201.43 Size of sample.—The following are minimum sizes of samples of agricultural seed, vegetable seed, and screenings to be submitted for analysis, test, or examination:

(a) Two ounces of grass seed not otherwise mentioned, white or alsike clover, or seeds not larger than these.

(b) Five ounces of red or crimson clover, alfalfa, lespedeza, ryegrass, bromegrass, millet, flax, rape, or seeds of similar size.

(c) One pound of Sudan grass, sorghum, proso, hemp, or seeds of similar size.

(d) Two pounds of cereals, vetch, or seeds of similar or larger size.

(e) Two quarts of screenings.

(f) Vegetable seed samples shall consist of at least 400 seeds.

201.44 Forwarding samples.—Before being forwarded for analysis, test, or examination, the containers of samples shall be properly sealed and identified in such manner as may be prescribed by the Production and Marketing Administration.

PURITY ANALYSIS IN THE ADMINISTRATION OF THE ACT

201.45 **Obtaining the working sample.** The working sample on which the actual analysis is made shall be taken from the submitted sample in such a manner that it will be representative.

With free-flowing seed, some form of efficient mechanical divider shall be used. With nonfree-flowing seed of a character that a mechanical divider cannot be used, the sample shall be mixed and placed in a pile and divided into halves. The sample shall be repeatedly divided to the weight to be used for the working samples and weighed as required by section 201.46.

201.46 **Weight of working sample.**—For the detailed purity analysis the working sample shall be at least the weight set forth in table 1.

TABLE 1.—Weight of working sample

Name of seed	Minimum weight for purity analysis			Approximate number of seeds per gram	Name of seed	Minimum weight for purity analysis			Approximate number of seeds per gram
	Gm	Gm	No.			Gm	Gm	No.	
<i>Agricultural seed</i>									
Alfalfa— <i>Medicago sativa</i> —	5	50	500						
Alfileria— <i>Erodium cicutarium</i> —	5	50	441						
Bahia grass— <i>Paspalum notatum</i> —	10	50	366						
Barley— <i>Hordeum vulgare</i> —	100	500	30						
Beans:									
Adzuki— <i>Phaseolus angularis</i> —	500	500	11						
Field— <i>Phaseolus vulgaris</i> —	500	500	4						
Mung— <i>Phaseolus aureus</i> —	100	500	24						
Velvet— <i>Stizolobium deerin-gianum</i> —	500	500	2						
Beet, field (Mangel)— <i>Beta vulgaris</i> —	50	300	54						
Beggarweed— <i>Desmodium tor-tuosum</i> —	5	50	442						
Bentgrass:									
Astoria— <i>Agrostis tenuis</i> —	½	25	12,048						
Colonial— <i>Agrostis tenuis</i> —	½	25	19,231						
Creeping— <i>Agrostis palustris</i> —	½	25	17,196						
Highland— <i>Agrostis tenuis</i> —	½	25	20,000						
Velvet— <i>Agrostis canina</i> —	½	25	23,810						
Bermuda grass— <i>Cynodon dac-tylon</i> —	1	25	3,940						
Bluegrass:									
Annual— <i>Poa annua</i> —	1	25	2,636						
Bulbous— <i>Poa bulbosa</i> —	2	50	1,020						
Canada— <i>Poa compressa</i> —	1	25	5,500						
Kentucky— <i>Poa pratensis</i> —	1	25	4,800						
Nevada— <i>Poa nevadensis</i> —	1	25	2,304						
Rough— <i>Poa trivialis</i> —	1	25	5,600						
Texas— <i>Poa arachnifera</i> —	1	25	2,500						
Wood— <i>Poa nemoralis</i> —	1	25	7,097						
Bluestem:									
Big— <i>Andropogon furcatus</i> ¹ —	10	50	336						
Little— <i>Andropogon scopar-ius</i> ¹ —	5	50	560						
Sand— <i>Andropogon hallii</i> ¹ —	10	50	233						
Brome:									
Mountain— <i>Bromus margi-natus</i> —	25	150	141						
Smooth— <i>Bromus inermis</i> —	5	50	300						
Broomcorn— <i>Sorghum vulgare</i> var. <i>technicum</i> —	50	300	60						
Buckwheat— <i>Fagopyrum esculentum</i> —	50	300	45						
Buffalo grass— <i>Buchloe dacty-loides</i> ² (Burs)—	50	300	110						
(Caryopses)—	2	50	738						
<i>Agricultural seed—Continued</i>									
Canary grass— <i>Phalaris canariensis</i> —	25	150	150						
Canary grass, reed— <i>Phalaris arundinacea</i> —	2	50	1,200						
Carpet grass— <i>Axonopus affinis</i> —	1	25	2,475						
Chickpea— <i>Cicer arietinum</i> —	500	500	2						
Clovers:									
Alsike— <i>Trifolium hybridum</i> —	2	50	1,500						
Alyce— <i>Alysicarpus vaginalis</i> —	5	50	664						
Berseem— <i>Trifolium alexan-drinum</i> —	5	50	456						
Bur— <i>Medicago hispida</i> (in bur)—	50	300	-----						
Bur— <i>Medicago hispida</i> (out of bur)—	10	50	375						
Bur, spotted— <i>Medicago ara-bica</i> (in bur)—	50	300	49						
Bur, spotted— <i>Medicago ara-bica</i> (out of bur)—	10	50	550						
Cluster— <i>Trifolium glomera-tum</i> —	1	25	2,924						
Crimson— <i>Trifolium incarnatum</i> —	10	50	330						
Ladino— <i>Trifolium repens</i> —	2	50	1,937						
Lappa— <i>Trifolium lappa-ceum</i> —	2	50	1,500						
Large hop— <i>Trifolium pro-cumbens</i> —	1	25	5,434						
Persian— <i>Trifolium resupin-atum</i> —	2	50	1,416						
Red— <i>Trifolium pratense</i> —	5	50	600						
Sour— <i>Melilotus indica</i> —	5	50	662						
Strawberry— <i>Trifolium fra-giferum</i> —	5	50	635						
Sub— <i>Trifolium subterraneum</i> —	25	150	119						
Suckling (small hop)— <i>Tri-folium dubium</i> —	2	50	1,948						
Sweet:									
White— <i>Melilotus alba</i> —	5	50	570						
Yellow— <i>Melilotus offici-nalis</i> —	5	50	570						
White— <i>Trifolium repens</i> —	2	50	1,500						
Corn:									
Field— <i>Zea mays</i> —	500	500	3						
Pop— <i>Zea mays</i> var. <i>erecta</i> —	500	500	-----						
Cotton— <i>Gossypium</i> spp.—	500	500	8						
Cowpea— <i>Vigna sinensis</i> —	500	500	8						

See footnotes at end of table.

TABLE 1.—Weight of working sample—Continued

Name of seed	Minimum weight for purity analysis	Minimum weight for noxious-weed seed examination	Approximate number of seeds per gram	Name of seed	Minimum weight for purity analysis	Minimum weight for noxious-weed seed examination	Approximate number of seeds per gram
<i>Agricultural seed—Continued</i>							
Crested dogtail— <i>Cynosurus cristatus</i>	Gm 2	Gm 50	No. 1,900	Millet—Continued	Gm 10	Gm 50	No. 320
Crotalaria— <i>Crotalaria spectabilis</i>	25	150	80	Japanese— <i>Echinochloa crus-galli</i> var. <i>frumentacea</i>	25	150	194
<i>Crotalaria intermedia</i>	10	50	207	Pearl— <i>Pennisetum glaucum</i>	25	150	180
<i>Crotalaria juncea</i>	100	500	36	Proso— <i>Panicum miliaceum</i>			
<i>Crotalaria lanceolata</i>	10	50	375	Molasses grass— <i>Melinis minutiflora</i>	1	25	15,000
<i>Crotalaria striata</i>	10	50	215	Mustard:			
Dallis grass— <i>Paspalum dilatatum</i>	3 2	50	592	Black— <i>Brassica nigra</i>	5	50	1,256
Dropseed, sand— <i>Sporobolus cryptandrus</i>	1/2	25	11,927	White— <i>Brassica hirta</i>	25	150	162
Fescue:				Napier grass— <i>Pennisetum purpureum</i>	5	50	
Chewings— <i>Festuca rubra</i> var. <i>commutata</i>	2	50	1,200	Oats— <i>Avena</i> spp.	100	500	28
Hair— <i>Festuca capillata</i>	1	25	3,200	Oatgrass, tall— <i>Arrhenatherum elatius</i>	10	50	330
Meadow— <i>Festuca elatior</i>	5	50	500	Orchard grass— <i>Dactylis glomerata</i>	2	50	1,441
Red— <i>Festuca rubra</i>	2	50	1,200	Panic grass, blue— <i>Panicum antidotale</i>	2	50	1,448
Sheep— <i>Festuca ovina</i>	2	50		Peanut— <i>Arachis hypogaea</i>	500	500	1-3
Tall— <i>Festuca arundinacea</i>	5	50	500	Peas, field— <i>Pisum sativum</i> var. <i>arvense</i>	500	500	4
Flax— <i>Linum usitatissimum</i>	10	50	178	Rape:			
Grama, blue— <i>Bouteloua gracilis</i> ¹	2	50	1,977	Annual— <i>Brassica napus</i> var. <i>annua</i>	10	50	346
Grama, side-oats— <i>Bouteloua curtipendula</i> ⁴ (other than caryopses)	5	50	422	Bird— <i>Brassica campestris</i>	10	50	425
(Caryopses)	2	50	1,607	Turnip— <i>Brassica campestris</i> vars.	10	50	536
Guinea grass— <i>Panicum maximum</i>	5	50	2,207	Winter— <i>Brassica napus</i> var. <i>biennis</i>	10	50	230
Harding grass— <i>Phalaris tuberosa</i> var. <i>stenoptera</i>	5	50	750	Redtop— <i>Agrostis alba</i>	1/2	25	11,000
Hemp— <i>Cannabis sativa</i>	50	300	46	Rescue grass— <i>Bromus catharticus</i>	25	150	144
Indian grass, yellow— <i>Sorghastrum nutans</i> ¹	10	50	364	Rhodes grass— <i>Chloris gayana</i>	1	25	4,724
Japanese lawn grass— <i>Zoysia japonica</i>	2	50	3,012	Rice— <i>Oryza sativa</i>	100	500	66
Johnson grass— <i>Sorghum halepense</i>	10	50	290	Ricegrass, Indian— <i>Oryzopsis hymenoides</i>	10	50	308
Kudzu— <i>Pueraria thunbergiana</i>	25	150	81	Rough pea— <i>Lathyrus hirsutus</i>	100	500	39
Lespedeza:				Rye— <i>Secale cereale</i>	100	500	40
Common and Kobe— <i>Lespedeza striata</i>	5	50	750	Ryegrass:			
Korean— <i>Lespedeza stipulacea</i>	5	50	525	Italian— <i>Lolium multiflorum</i>	5	50	500
Sericea or Chinese— <i>Lespedeza cuneata</i> (<i>L. sericea</i>)	5	50	820	Perennial— <i>Lolium perenne</i>	5	50	500
Siberian— <i>Lespedeza hedsoroides</i>	5	50	820	Sainfoin— <i>Onobrychis viciaefolia</i>	50	300	50
Lovegrass, weeping— <i>Eragrostis curvula</i>	1	25	3,282	Sesbania— <i>Sesbania exaltata</i>	25	150	105
Lupine:				Smilo— <i>Oryzopsis miliacea</i>	2	50	2,008
Blue— <i>Lupinus angustifolius</i>	500	500	7	Sorghum:			
White— <i>Lupinus albus</i>	500	500	7	Grain and Sweet (sorgo)— <i>Sorghum vulgare</i>	50	300	50-55
Yellow— <i>Lupinus luteus</i>	500	500	9	<i>Sorghum vulgare</i> var. <i>sudanense</i>	500	500	6-13
Manila grass— <i>Zoysia matrella</i>	2	50		Sunflower (Cult.)— <i>Helianthus annuus</i>	100	500	
Meadow foxtail— <i>Alopecurus pratensis</i>	2	50	1,200	Sweet vernalgrass— <i>Anthoxanthum odoratum</i>	2	50	1,600
Medick, black— <i>Medicago lupulina</i>	5	50	586	Switch grass— <i>Panicum virgatum</i>	5	50	814
Millet:				Timothy— <i>Phleum pratense</i>	2	50	2,500
Brown top— <i>Panicum fasciculatum</i>	10	50	303	Trefoil, big— <i>Lotus uliginosus</i>	2	50	1,944
Foxtail—Such as common, German, Hungarian, Siberian, or Golden— <i>Setaria italica</i>	5	50	470	Trefoil, birdsfoot— <i>Lotus corniculatus</i>	2	50	814
				Vasey grass— <i>Paspalum urvillei</i>	2	50	970
				Velvet grass— <i>Holcus lanatus</i>	1	25	3,359
				Vetch:			
				Common— <i>Vicia sativa</i>	100	500	19
				Hairy— <i>Vicia villosa</i>	100	500	36

See footnotes at end of table.

TABLE 1.—Weight of working sample—Continued

Name of seed	Minimum weight for purity analysis			Approximate number of seeds per gram	Name of seed	Minimum weight for purity analysis			Approximate number of seeds per gram
	Gm	Gm	No.			Gm	Gm	No.	
<i>Agricultural seed—Continued</i>									
Vetch—Continued					Corn, sweet— <i>Zea mays</i>	500	500		
Hungarian— <i>Vicia pannonica</i>	100	500	24		Cornsalad—(<i>Fetticus</i>)— <i>Valerianella locusta</i> var. <i>olitoria</i>	10	50	380	
Monantha— <i>Vicia articulata</i> (<i>V. monantha</i>)	100	500			Cowpea— <i>Vigna sinensis</i>	500	500	8	
Narrowleaf— <i>Vicia angustifolia</i>	50	300	60		Cress:				
Purple— <i>Vicia atropurpurea</i>	100	500	22		Garden— <i>Lepidium sativum</i>	5	50	424	
Woollypod— <i>Vicia dasycarpa</i>	100	500	25		Water— <i>Rorippa nasturtium-aquaticum</i>	1	25	5, 172	
Wheat: Common, spelt, emmer, durum— <i>Triticum</i> spp.	100	500	25		Cucumber— <i>Cucumis sativus</i>	100	500	38	
Wheatgrass:					Dandelion— <i>Taraxacum officinale</i>	2	50	1, 240	
Crested, fairway— <i>Agropyron cristatum</i>	5	50	714		Eggplant— <i>Solanum melongena</i> var. <i>esculentum</i>	10	50	228	
Crested, standard— <i>Agropyron cristatum</i>	10	50	425		Endive— <i>Cichorium endivia</i>	5	50	940	
Slender— <i>Agropyron pauciflorum</i>	10	50	340		Kale— <i>Brassica oleracea</i> var. <i>acephala</i>	10	50	315	
Western (Bluestem)— <i>Agropyron smithii</i>	10	50	235		Kohlrabi— <i>Brassica oleracea</i> var. <i>gongylodes</i>	10	50	315	
Wild-rye, Canada— <i>Elymus canadensis</i>	10	50	261		Leek— <i>Allium porrum</i>	10	50	396	
<i>Vegetable seed</i>									
Artichoke— <i>Cynara scolymus</i>	100	500	24		Lettuce— <i>Lactuca sativa</i>	5	50	888	
Asparagus— <i>Asparagus officinalis</i>	100	500	25		Muskmelon— <i>Cucumis melo</i>	100	500	45	
Beans:					Mustard:				
Asparagus— <i>Vigna sesquipedalis</i>	100	500	8		India— <i>Brassica juncea</i>	5	50	624	
Garden— <i>Phaseolus vulgaris</i>	500	500	4		Spinach— <i>Brassica perviridis</i>	5	50	536	
Horse or broad— <i>Vicia faba</i>	500	500			Okra— <i>Hibiscus esculentus</i>	100	500	19	
Lima— <i>Phaseolus lunatus</i> var. <i>macrocarpus</i>	500	500	2		Onion— <i>Allium cepa</i>	10	50	341	
Runner— <i>Phaseolus coccineus</i>	500	500	1		Pak-choi— <i>Brassica chinensis</i>	5	50	633	
Beet— <i>Beta vulgaris</i>	50	300	58		Parsley— <i>Petroselinum hortense</i>	5	50	648	
Broccoli— <i>Brassica oleracea</i> var. <i>botrytis</i>	10	50	315		Parsnip— <i>Pastinaca sativa</i>	10	50	429	
Brussels sprouts— <i>Brassica oleracea</i> var. <i>gemmifera</i>	10	50	315		Peas, garden— <i>Pisum sativum</i>	500	500	3	
Cabbage— <i>Brassica oleracea</i> var. <i>capitata</i>	10	50	315		Pepper— <i>Capsicum</i> spp.	25	150	167	
Cardoon— <i>Cynara cardunculus</i>	100	500			Pe-tsai (Chinese cabbage)— <i>Brassica pekinensis</i>	5	50	633	
Carrot— <i>Daucus carota</i>	5	50	826		Pumpkin— <i>Cucurbita pepo</i>	500	500	4	
Cauliflower— <i>Brassica oleracea</i> var. <i>botrytis</i>	10	50	315		Radish— <i>Raphanus sativus</i>	50	300	75	
Celeriac— <i>Apium graveolens</i> var. <i>rapaceum</i>	1	25	2, 521		Rhubarb— <i>Rheum rhaboticum</i>	50	300	60	
Celery— <i>Apium graveolens</i> var. <i>dulce</i>	1	25	2, 521		Rutabaga— <i>Brassica napus</i> var. <i>napobrassica</i>	10	50	428	
Chicory— <i>Cichorium intybus</i>	5	50	940		Salsify— <i>Tragopogon porrifolius</i>	50	300	66	
Citron— <i>Citrullus vulgaris</i>	500	500	11		Sorrel— <i>Rumex acetosa</i>	2	50	1, 079	
Collards— <i>Brassica oleracea</i> var. <i>acephala</i>	10	50	315		Soybean (vegetable)— <i>Glycine max</i>	500	500	6-13	
					Spinach:				
					Common— <i>Spinacia oleracea</i>	25	150	100	
					New Zealand— <i>Tetragonia expansa</i>	100	500	13	
					Squash— <i>Cucurbita moschata</i> and <i>C. maxima</i>	500	500	14	
					Swiss chard— <i>Beta vulgaris</i> var. <i>cicla</i>	50	300	58	
					Tomato:				
					Common— <i>Lycopersicon esculentum</i>	5	50	405	
					Husk— <i>Physalis pubescens</i>	2	50	1, 240	
					Turnip— <i>Brassica rapa</i>	10	50	536	
					Watermelon— <i>Citrullus vulgaris</i>	500	500	11	

¹ Pure seed unit consists of naked caryopsis, spikelet, or floret with at least 1 caryopsis.

² Pure seed unit consists of bur, floret, or caryopsis.

³ If the purity separation of Dallis grass yields less than 400 seeds a duplicate analysis shall be made and the results shall be calculated on the basis of the 4-gram sample.

⁴ Pure seed unit consists of spike, spikelet, floret, or caryopsis.

201.47 Separation.—The working sample shall be weighed in grams to four significant figures and then separated into four parts: (1) Kind, variety, or type to be considered pure seed; (2) other crop seed; (3) weed seeds; and (4) inert matter.

Each of these four component parts shall be weighed in grams to the same number of decimal places as the working sample and the percentage by weight of each part (based on the sum of the weights of the component parts and not on the original weight) shall be determined. The sum of the weights of the component parts shall be compared with the original weight of the working sample as a check against loss of material or other error. In the case of other crop seed and weed seed, the seeds of each species shall be separated where possible and the number or weight of each kind determined. The separation of the seed of the kind, variety, or type considered pure seed must be on such a basis that the separation can be made definitely by seed characteristics, except that when the sample contains two or more similar kinds of seeds the separation of which in the entire working sample would be very difficult, it is permissible to separate and weigh the similar seeds as a group. From this mixture at least 400 seeds are to be taken indiscriminately and the separation made on this portion. The proportion of each kind is then determined by weight, and from this the percentage in the entire sample is calculated.

201.48 Kind, variety, or type considered pure seed.—The pure seed shall include: (a) All seeds of each kind, variety, or type under consideration present in excess of 5 percent of the whole, whether shriveled, cracked, or otherwise injured, and (b) pieces of such seeds that are larger than one-half of the original size, whether broken, insect-damaged, or diseased: *Provided*, That seeds of legumes and crucifers with the seed coat entirely removed shall be classified as inert matter and not as pure seed.

201.49 Other crop seed.—Other crop seed shall include: (a) Seeds of plants grown as crops (other than the kind, variety, or type included in the pure seed) each kind, variety, or type of which is present in a proportion to the whole of 5 percent or less, whether shriveled, cracked, or otherwise injured, and (b) pieces of such seeds larger than one-half of the original size whether broken, insect-damaged, or diseased: *Provided*, That other crop seed shall not include (1) seeds of plants recognized as weeds or (2) seeds of legumes and crucifers with the seed coats entirely removed.

201.50 Weed seed.—Seeds, bulblets, or tubers of plants recognized as weeds by laws or official regulations or by general usage shall be considered weed seeds: *Provided*, That undeveloped or badly injured weed seeds, including noxious-weed seeds, as described under inert matter shall be considered inert matter and not weed seed. When seeds of *Juncus* spp. are present and would not add more than 0.1 percent to the percentage of weed seed, they need not be separated but may be included with the inert matter.

201.51 Inert matter.—Inert matter shall include seedlike structures from both crop and weed plants and other matter not seeds as follows:

(a) *Seedlike structures from crop plants.*—Pieces of seeds one-half the original size or less, whether broken, insect-damaged, or diseased; seeds of legumes and crucifers with the seed coats entirely removed; empty glumes and sterile florets of grasses; attached sterile florets of grasses (which must be removed from the fertile florets except in bluegrasses, Rhodes grass, bluestems, tall oatgrass, and gramas).

(b) *Seedlike structures from weed plants.*—All badly injured, undeveloped, or empty structures which resemble seeds but which by visual examination (including dissection or the use of reflected light) can be easily demonstrated as having no embryo or having only a rudimentary embryo or having an embryo that has been destroyed by a disease organism. Included as inert matter are structures from weed plants as follows:

- (1) Seeds of grasses with over half the embryo removed;
- (2) "Seeds" of dodder which are fragile, ashen gray to brown in color, and somewhat enlarged;

- (3) Ragweed seed with both the involucre and pericarp absent;
- (4) Shriveled, blackened seeds of buckhorn;
- (5) Empty seeds or fruits such as occur in the sedge, buckwheat, morning-glory, and sunflower families;
- (6) Empty glumes and sterile florets of grasses;
- (7) Seeds of legumes and species of *Brassica* with the seed coats entirely removed;
- (8) Bulblets of wild onion and garlic with the basal or stem end portion removed; and
- (9) Seeds of *Juncus* spp. when not in excess of 0.1 percent.

(c) *Other matter*.—Soil, sand, stones, chaff, stems, leaves, nematode galls, and fungus bodies (such as ergot and other sclerotia and smut balls), and other material not seed.

201.52 Noxious-weed seeds.—The determination of the number of seeds, bulblets, or tubers of individual noxious weeds present per unit weight should be made on at least the minimum quantities listed in table 1 except that if 30 or more noxious-weed seeds, bulblets, or tubers of one species are found in the pure seed analysis or noxious-weed seed examination of a like amount, the rate of occurrence of that species shall be based on the pure seed analysis and the occurrence of that species in the remainder of the bulk examined for noxious-weed seeds need not be noted.

GERMINATION TESTS IN THE ADMINISTRATION OF THE ACT

201.53 Source of seeds for germination.—(a) When both purity and germination tests are required, seeds for germination shall be taken from the separation of the kind, variety, or type considered pure seed and shall be counted without discrimination as to size or appearance.

(b) When only a germination test is required and the pure seed is estimated or determined to be at least 98 percent, the pure seed for the germination test may be taken indiscriminately from a representative portion of the bulk.

(c) When only a germination test is required and the pure seed is found to be less than 98 percent, the pure seed shall be taken indiscriminately from a pure seed separation made according to the provisions of these rules and regulations which govern the separation of the kind, variety, or type considered pure seed except that other crop seeds, inert matter, and weed seeds need not be separated.

201.54 Number of seeds for germination.—At least 400 seeds shall be tested for germination except that in mixtures, 200 seeds of each of those kinds present to the extent of 15 percent or less may be used in lieu of 400, in which case an additional 2 percent is to be added to the regular germination tolerances. The seeds shall be tested in replicate tests of 100 seeds or less.

201.55 Retests.—Retests shall be made if there is a difference of 10 percent between any two of the separate hundred seeds tested when the average of the tests is 80 percent or above, and if there is a difference of 15 percent when the average is below 80 percent; otherwise, the average of the tests shall be considered the result of the test.

201.56 Interpretation.—A seed shall be considered to have germinated when it has developed into a normal seedling. Broken seedlings and weak, malformed, and obviously abnormal seedlings shall not be considered to have germinated.

201.57 Hard seeds.—Seeds which remain hard at the end of the prescribed test because they have not absorbed water, due to an impermeable seed coat, are to be counted as "hard seed." If at the end of the germination period provided for legumes, okra, and asparagus in these rules and regulations there are still present swollen seeds or seeds of these kinds which have just started to germinate, all seeds or seedlings except the above-stated shall be removed and the test continued for 5 additional days and the normal seedlings included in the percentage of germination.

201.58 Methods of testing for germination and hard seed.

TABLE 2.—*Methods of testing for laboratory germination and hard seed*

Name of seed	Substrata ¹	Tempera-ture ²	First count ³	Final count	Remarks ⁴
		°C.	Days	Days	
<i>Agricultural seed</i>					
Alfalfa— <i>Medicago sativa</i> -----	B, S	20	4	7	Photos 2481, 2486.
Alfileria— <i>Erodium cicutarium</i> -----	B	20-30	3	14	Clip seeds.
Bahia grass— <i>Paspalum notatum</i> .	P	30-35	3	21	Light; remove all glumes with aid of sharp scalpel; fresh and dormant seed lightly scratch surface of caryopsis and use KNO_3 . ⁶
Barley— <i>Hordeum vulgare</i> -----	T, S	20	4	7	Fresh and dormant seed prechill 5 days at 5° or 10° C. ⁷
<i>Beans:</i>					
Adzuki— <i>Phaseolus angularis</i> .	R, S	20-30	4	5 10	
Field— <i>Phaseolus vulgaris</i> .	R, S	20-30	5	5 8	Watch for abnormalities; open the cotyledons if plumule is not visible. Abnormal seedlings include those without a terminal bud or growing point of the stem ("baldheads") and seedlings with both primary leaves absent even though the terminal bud or growing point is present ("snakeheads"). Such abnormal seedlings are not to be included in determining the percentage of germination. Photos 1834, 1835, 1846, 1854, 1855.
Mung— <i>Phaseolus aureus</i> .	R, S	20-30	3	5 7	
Velvet— <i>Stizolobium deeringianum</i> .	R, C, S	20-30	3	5 14	
Beet, field (Mangel)— <i>Beta vulgaris</i> .	B	20-30	3	14	Soak in water 2 hours before testing, using at least 250 cc. water per 100 "seeds"; wash in running water after soaking and blot surface dry. Samples producing darkened radicles should be retested in sand or soil or by washing in running water for 3 hours and testing on 0.3 inch thick "Kimpak" containing 85 cc. water per 9" x 9" square on top of moistened blotters, keeping seed covered with slightly moist blotters.
Beggarweed, <i>Desmodium tortuosum</i> .	B	30	5	28	
<i>Bentgrass:</i>					
Astoria, Colonial and Highland— <i>Agrostis tenuis</i> .	P	20-30	7	28	Light, KNO_3 . ⁶ ; fresh seed KNO_3 . ⁶ 10-30° C., and approximately 100 foot-candles of light.
Creeping (seaside)— <i>Agrostis palustris</i> .	P	20-30	7	28	Light, KNO_3 . ⁶
Velvet— <i>Agrostis canina</i> ...	P	20-30	7	21	Do.
Bermuda grass— <i>Cynodon dactylon</i> .	P	20-35	7	21	Light, KNO_3 . ⁶ . Photo 2518.
<i>Bluegrass:</i>					
Annual— <i>Poa annua</i> -----	P	20-30	7	21	Light.
Bulbous— <i>Poa bulbosa</i> -----	P, S	10	10	35	Prechill 1 week at 5° C. ⁷ . KNO_3 . ⁶ or soil.
Canada— <i>Poa compressa</i> -----	P	15-30	10	28	Light, 0.1% KNO_3 . ⁶ ; fresh and dormant seed KNO_3 . ⁶ 10-30° C. and approximately 100 foot-candles of light.
Kentucky— <i>Poa pratensis</i> .	P	15-30	10	28	Light, 0.1% KNO_3 . ⁶ Prechill dormant seeds at 10° C. for 5 days. ⁷
Nevada— <i>Poa nevadensis</i> ...	P	20-30	7	21	Light, KNO_3 . ⁶
Rough— <i>Poa trivialis</i> -----	P	20-30	7	21	Light.
Texas— <i>Poa arachnifera</i> ...	P	20-30	7	28	Light, KNO_3 . ⁶ prechill fresh and dormant seed at 5° C. for 2 weeks. ⁷
Wood— <i>Poa nemoralis</i> ----	P	20-30	7	28	Light.
<i>Bluestem:</i>					
Big— <i>Andropogon furcatus</i> .	P, TS	20-30	7	28	Light, KNO_3 . ⁶ prechill fresh and dormant seed at 5° C. for 2 weeks. ⁷
Little— <i>Andropogon scoparius</i> .	P, TS	20-30	7	28	Do.
Sand— <i>Andropogon hallii</i> ..	P, TS	20-30	7	28	Do.
<i>Brome:</i>					
Mountain— <i>Bromus marginatus</i> .	P	20-30	6	14	Light.
Smooth— <i>Bromus inermis</i> .	P, TB	20-30	6	14	Do.
Broomcorn— <i>Sorghum vulgare</i> var. <i>technicum</i> .	B, S	20-30	3	10	
Buckwheat— <i>Fagopyrum esculentum</i> .	B, T	20-30	3	6	

See footnotes at end of table.

TABLE 2.—*Methods of testing for laboratory germination and hard seed—Continued*

Name of seed	Substrata ¹	Tempera-ture ²	First count ³	Final count	Remarks ⁴
<i>Agricultural seed—Con.</i>					
Buffalo grass— <i>Buchloe dactyloides</i> — (Burs)-----	P, TB, TS	°C. 20-35	Days 7	Days 28	Light, KNO_3 , ⁶ prechill fresh and dormant seed at 5° C. ⁷ for 6 weeks and germinate 14 additional days.
(Caryopses)-----	P	20-35	5	14	Light, KNO_3 , ⁶
Canary grass— <i>Phalaris canariensis</i> .-----	B	20-30	3	7	
Canary grass, reed— <i>Phalaris arundinacea</i> .-----	P	20-30	5	21	Light; fresh and dormant seed KNO_3 , ⁶
Carpet grass— <i>Axonopus affinis</i> .-----	P	20-35	10	21	Do.
Chickpea— <i>Cicer arietinum</i> -----	R, S	20-30	3	7	
Clovers: Alsike— <i>Trifolium hybridum</i> .-----	B, S	20	3	5 7	Dormant seed 15° C. The germination temperature should never exceed 20° C. and a temperature of 17° to 18° is most desirable.
Alyce— <i>Alysicarpus vaginalis</i> .-----	B	35	4	5 21	At conclusion of 21-day test period carefully pierce seed coat of swollen seeds with needle or scalpel and continue test for 5 days.
Berseem— <i>Trifolium alexandrinum</i> .-----	B, S	20	3	5 7	Dormant seed 15° C. The germination temperature should never exceed 20° C. and a temperature of 17° to 18° is most desirable.
Bur— <i>Medicago hispida</i> -----	B, T	20	4	5 14	Remove seeds from bur.
Bur, spotted— <i>Medicago arabica</i> .-----	B, T	20	4	5 14	Do.
Cluster— <i>Trifolium glomeratum</i> .-----	B	20	4	5 10	Dormant seed 15° C. The germination temperature should never exceed 20° C. and a temperature of 17° to 18° is most desirable.
Crimson— <i>Trifolium incarnatum</i> .-----	B, S	20	4	5 7	Dormant seed 15° C. The germination temperature should never exceed 20° C. and a temperature of 17° to 18° is most desirable. Photos 2479, 2482.
Ladino— <i>Trifolium repens</i> .-----	B, S	20	3	5 7	Dormant seed 15° C. The germination temperature should never exceed 20° C. and a temperature of 17° to 18° is most desirable.
Lappa— <i>Trifolium lapaceum</i> .-----	B	20	3	5 7	Do.
Large hop— <i>Trifolium procumbens</i> .-----	B	20	4	5 14	Do.
Persian— <i>Trifolium resupinatum</i> .-----	B	20	3	5 7	Do.
Red— <i>Trifolium pratense</i> -----	B, S	20	4	5 7	Dormant seed 15° C. The germination temperature should never exceed 20° C. and a temperature of 17° to 18° is most desirable. Photos 2483, 2484.
Sour— <i>Melilotus indica</i> -----	B	20	3	5 14	
Strawberry— <i>Trifolium fragiferum</i> .-----	B	20	3	5 7	Dormant seed 15° C. The germination temperature should never exceed 20° C. and a temperature of 17° to 18° is most desirable.
Sub— <i>Trifolium subterraneum</i> .-----	B	20	4	5 14	Do.
Suckling (small hop)— <i>Trifolium dubium</i> .-----	B	20	4	5 14	Do.
Sweet— <i>Melilotus alba</i> and <i>M. officinalis</i> .-----	B, S	20	4	5 7	Photos 2374, 2375, 2376, 2381.
White— <i>Trifolium repens</i> .-----	B, S	20	3	5 7	Dormant seed 15° C. The germination temperature should never exceed 20° C. and a temperature of 17° to 18° is most desirable.
Corn: Field— <i>Zea mays</i> -----	R, S	20-30	4	7	Photos 2510, 2511, 2512, 2514.
Pop— <i>Zea mays</i> var. <i>evera</i> -----	R, S	20-30	4	7	
Cotton— <i>Gossypium</i> spp-----	R, S	20-30	4	12	Roll towel tests in upright position, alternate method: Shake seed in a closed container, thoroughly wetting the lint. Blot off excess moisture.

See footnotes at end of table.

TABLE 2.—*Methods of testing for laboratory germination and hard seed—Continued*

Name of seed	Substrata ¹	Tempera-ture ²	First count ³	Final count	Remarks ⁴
<i>Agricultural seed—Con.</i>					
Cowpea— <i>Vigna sinensis</i> -----	R, S	°C. 20-30	Days 5	Days 5 8	Watch for weevil injury to plumule. Photos 1989, 1990, 2377.
Crested dogtail— <i>Cynosurus cristatus</i> .	P	20-30	10	21	Light; fresh and dormant seed prechill for 3 days at 5° or 10° C. ⁷
Crotalaria— <i>Crotalaria intermedia</i> , <i>C. juncea</i> , <i>C. lanceolata</i> , <i>C. spectabilis</i> , and <i>C. striata</i> .	B, S	20-30	4	5 10	Photos 2496, 2497.
Dallis grass— <i>Paspalum dilatatum</i> .	P	20-35	7	21	Light; fresh and dormant seed KNO ₃ . ⁶
Dropseed, sand— <i>Sporobolus cryptandrus</i> .	P	15-35	5	42	Light, KNO ₃ ; ⁶ dormant seed prechill at 5° C. for 4 to 8 weeks and germinate for 28 days. ⁷
<i>Fescue:</i>					
Chewings— <i>Festuca rubra</i> var. <i>commutata</i> .	P	15-25	7	21	Alternate method: 20-30° C., light, and test for 28 days.
Hair— <i>Festuca capillata</i> -----	P	10-25	10	28	KNO ₃ . ⁶
Meadow— <i>Festuca elatior</i> -----	P	20-30	5	14	Light.
Red— <i>Festuca rubra</i> -----	P	15-25	7	21	Alternate method: 20-30° C., light, and test for 28 days.
Sheep— <i>Festuca ovina</i> -----	P	15-25	7	21	Do.
Tall— <i>Festuca arundinacea</i> .	P	20-30	5	14	Light.
Flax— <i>Linum usitatissimum</i> ---	B, S	20-30	3	7	Photos 2003, 2008, 2485, 2487.
<i>Gramas:</i>					
Blue— <i>Bouteloua gracilis</i> -----	P, TB	20-30	7	28	Light; fresh and dormant seed KNO ₃ .
Side-oats— <i>Bouteloua curtipendula</i> .	P	15-30	7	28	Light, KNO ₃ . ⁶
Guinea grass— <i>Panicum maximum</i> .	P	20-30	10	28	Light.
Harding grass— <i>Phalaris tuberosa</i> var. <i>stenoptera</i> .	P	10-30	7	28	Light; fresh and dormant seed KNO ₃ . ⁶
Hemp— <i>Cannabis sativa</i> -----	B	20-30	3	7	
Indian grass, yellow— <i>Sorghastrum nutans</i> .	P, TS	20-30	7	28	Light, KNO ₃ ; fresh and dormant seed prechill at 5° C. for 2 weeks. ^{6, 7}
Japanese lawn grass— <i>Zoysia japonica</i> .	P	20-35	10	28	Light, KNO ₃ . ⁶
Johnson grass— <i>Sorghum halepense</i> .	P	20-35	7	35	Light; fresh and dormant seed KNO ₃ . ⁶
Kudzu— <i>Pueraria thunbergiana</i> .	T	20-30	5	5 14	
<i>Lespedeza:</i>					
Common (Kobe)— <i>Lespedeza striata</i> .	B, S	20-35	7	5 14	
Korean— <i>Lespedeza stipulacea</i> .	B	20-35	5	5 14	
Sericia or Chinese— <i>Lespedeza cuneata</i> (<i>L. sericea</i>).	B, S	20-35	7	5 28	Photo 2494.
Siberian— <i>Lespedeza hedysaroides</i> .	B, S	20-35	7	5 21	
Lovegrass, weeping— <i>Eragrostis curvula</i> .	P	20-35	5	14	Light; fresh and dormant seed KNO ₃ . ⁶
<i>Lupine:</i>					
Blue— <i>Lupinus angustifolius</i> .	R, S	20	4	5 10	Photos 14535 through 14542.
White— <i>Lupinus albus</i> -----	R, T	20	3	5 7	
Yellow— <i>Lupinus luteus</i> -----	R, T	20	7	5 21	
Manila grass— <i>Zoysia matrella</i> .	P	20-35	10	28	Light, KNO ₃ . ⁶
Meadow foxtail— <i>Alopecurus pratensis</i> .	P	20-30	7	14	Light.
Medick, black— <i>Medicago lupulina</i> .	B, S	20	4	5 7	
<i>Millet:</i>					
Brown top— <i>Panicum fasciculatum</i> .	B	20-30	4	14	
Foxtail—Such as common, German, Hungarian, Siberian, or Golden— <i>Setaria italica</i> .	B	20-30	4	10	
Japanese— <i>Echinochloa crusgalli</i> var. <i>frumentacea</i> .	B	20-30	4	10	
Pearl— <i>Pennisetum glaucum</i> .	B	20-30	3	7	
Proso— <i>Panicum miliaceum</i> .	B	20-30	3	7	

See footnotes at end of table.

TABLE 2.—Methods of testing for laboratory germination and hard seed—Continued

Name of seed	Substrata ¹	Temperature ²	First count ³	Final count	Remarks ⁴
<i>Agricultural seed—Con.</i>					
Molasses grass— <i>Melinis minutiflora</i> .	P	°C 20-30	Days 7	Days 21	Light.
Mustard:					
Black— <i>Brassica nigra</i> —	P	20-30	3	7	Light; fresh and dormant seed KNO_3 , ⁶ and prechill at 10° C. for 3 days. ⁷
White— <i>Brassica hirta</i> —	P	20-30	3	5	Light.
Napier grass— <i>Pennisetum purpureum</i> .	B	20-30	3	10	
Oats— <i>Avena</i> spp.—	T, S	20	5	10	Fresh and dormant seed prechill for 5 days at 5° or 10° C., and conclude test on seventh day. ⁷ Photos 2407, 2408, 2524 through 2527.
Oatgrass, tall— <i>Arrhenatherum elatius</i> .	P	20-30	6	14	Light.
Orchard grass— <i>Dactylis glomerata</i> .	P, S	20-30	7	21	Light, germination more rapid in soil.
Panic grass, blue— <i>Panicum antidotale</i> .	P, TS	20-30	7	28	Light.
Peanut— <i>Arachis hypogaea</i> —	R, S	20-30	5	10	Remove shells.
Peas, field— <i>Pisum sativum</i> var. <i>arvense</i> .	R, S	20	3	8	Photos 2503, 2506, 14543 through 14547.
Rape:					
Annual— <i>Brassica napus</i> var. <i>annua</i> .	B	20-30	3	7	
Bird— <i>Brassica campestris</i> .	P	20-30	3	10	Light, fresh and dormant seed KNO_3 , ⁶
Turnip— <i>Brassica campestris</i> vars.	B	20-30	3	7	
Winter— <i>Brassica napus</i> var. <i>biennis</i> .	B	20-30	3	7	
Redtop— <i>Agrostis alba</i> —	TB, P	20-30	5	10	Light.
Rescue grass— <i>Bromus catharticus</i> .	P, S	10-30	7	28	Light; fresh and dormant seed in soil at 15° C.
Rhodes grass— <i>Chloris gayana</i> .	P	20-30	6	14	Light.
Rice— <i>Oryza sativa</i> —	B, T	20-30	5	14	
Ricegrass, Indian— <i>Oryzopsis hymenoides</i>	P	15	7	42	Prechill fresh and dormant seed at 3° C. for 4 weeks and test for 21 additional days. ⁷
Rough grass— <i>Lathyrus hirsutus</i> .	T	20	7	8	
Rye— <i>Secale cereale</i> —	T, S	20	4	7	Prechill fresh and dormant seed at 5° or 10° C. for 5 days. ⁷ Photos 2403, 2406, 2528 through 2531.
Ryegrass:					
Italian— <i>Lolium multiflorum</i> .	P, TB	20-30	5	14	KNO_3 , ⁶ light; for fluorescence test the seed should be germinated on filter paper; fresh and dormant seed KNO_3 , ⁶ 10-30° C. and approximately 100 foot-candles of light.
Perennial— <i>Lolium perenne</i> .	P, TB	20-30	5	14	Light; for fluorescence test the seed should be germinated on filter paper.
Sainfoin— <i>Onobrychis viciaefolia</i> .	B	20-30	4	8	
Sesbania— <i>Sesbania exaltata</i> —	T	20-30	5	7	
Smilo— <i>Oryzopsis miliacea</i> —	P	20-30	7	42	Light; fresh and dormant seed prechill at 5° C. for 2 weeks. ⁷
Sorghum:					
Grain and Sweet (sorgo)— <i>Sorghum vulgare</i> .	B, S	20-30	4	10	Fresh and dormant seed prechill at 5° or 10° C. for 5 days. ⁷ Photos 2413 through 2416.
Soybean— <i>Glycine max</i> —	R, S	20-30	5	8	Photos 2371, 2372, 2378.
Sudan grass— <i>Sorghum vulgare</i> var. <i>sudanense</i> .	B, S	20-30	4	10	Photos 2449 through 2452.
Sunflower (Cult.)— <i>Helianthus annuus</i> .	T, B	20-30	3	7	
Sweet vernalgrass— <i>Anthoxanthum odoratum</i> .	P	20-30	6	14	Light.
Switch grass— <i>Panicum virgatum</i> .	P, TS	15-30	7	28	Light, KNO_3 , ⁶ fresh and dormant seed prechill at 5° C. for 2 weeks. ⁷
Timothy— <i>Phleum pratense</i> —	P, TB	20-30	5	10	Light, fresh and dormant seed KNO_3 , ⁶ Photo 2399.
Trefoil:					
Big— <i>Lotus uliginosus</i> —	B	20	3	8	
Birdsfoot— <i>L. corniculatus</i> —	B	20	3	7	
Vasey grass— <i>Paspalum urvillei</i> .	P	20-35	7	21	Light; fresh and dormant seed KNO_3 , ⁶
Velvet grass— <i>Holcus lanatus</i> .	P	20-30	6	14	Light.

See footnotes at end of table.

TABLE 2.—*Methods of testing for laboratory germination and hard seed—Continued*

Name of seed	Substrata ¹	Tempera-ture ²	First count ³	Final count	Remarks ⁴
<i>Agricultural seed—Con.</i>					
Vetch:		°C.	Days	Days	
Common— <i>Vicia sativa</i>	T	20	5	5 10	Test questionable samples with stubby roots in soil.
Hairy— <i>Vicia villosa</i>	T	20	5	5 14	Photos 2453 through 2457.
Hungarian— <i>Vicia pan-nonica</i> .	T	20	5	5 10	
Monantha— <i>Vicia articu-lata</i> (<i>V. monantha</i>).	T	20	5	5 10	
Narrowleaf— <i>Vicia angus-tifolia</i> .	T	20	5	5 14	
Purple— <i>Vicia atropur-purea</i> .	T	20	5	5 10	
Woollypod— <i>Vicia dasy-carpa</i> .	T	20	5	5 14	
<i>Wheat:</i>					
Common, club, Polish (including spelt, and emmer)— <i>Triticum</i> spp.	T, S	20	4	7	Fresh and dormant seed prechill at 5° or 10° C. for 5 days. ⁷ Photos 2507, 2520 through 2522.
Durum— <i>Triticum durum</i> .	T, S	20	4	10	Fresh and dormant seed prechill at 5° or 10° C. for 5 days. ⁷
<i>Wheatgrass:</i>					
Crested (Fairway and Standard)— <i>Agropyron cristatum</i> .	P, TB	20-30	5	14	Light; fresh and dormant seed KNO ₃ , ⁸ and 5° or 10° C. for 7 days. ⁷
Slender— <i>Agropyron pau-ciflorum</i> .	P, TB	20-30	5	14	Light.
Western (Bluestem)— <i>Agropyron smithii</i> .	P	20-30	7	35	Light; fresh and dormant seed KNO ₃ , ⁸ or soil and 15°-30° C.
Wild-rye, Canada— <i>Elymus canadensis</i> .	P	15-30	7	21	Light; fresh and dormant seed, prechill at 5° C. for 2 weeks. ⁷
<i>Vegetable seed</i>					
Artichoke— <i>Cynara scolymus</i> ..	T	20-30	7	21	
Asparagus— <i>Asparagus officinalis</i> .	T	20-30	7	5 21	
<i>Beans:</i>					
Asparagus— <i>Vigna sesqui-pedalis</i> .	R, S	20-30	5	5 8	Watch for weevil injury to plumule.
Garden— <i>Phaseolus vul-garis</i> .	R, S	20-30	5	5 8	Watch for abnormalities; open the cotyledons if plumule is not visible. Abnormal seedlings in beans include seedlings without a terminal bud or growing point of the stem ("bald-heads") and seedlings with both primary leaves absent even though the terminal bud or growing point is present ("snakeheads"). Such abnormal seedlings are not to be included in determining the percentage of germination. Photos 1834, 1835, 1846, 1854, 1855.
Horse or broad— <i>Vicia faba</i> .	S, C	20	4	14	Prechill fresh and dormant seed 3 days at 10° C. ⁷ The germination tempera-ture should never exceed 20° C. and a temperature of 17° to 18° C. is most desirable.
Lima— <i>Phaseolus lunatus</i> var. <i>macrocarpus</i> .	R, S, C	20-30	5	9	Watch for abnormalities; open the cotyledons if plumule is not visible. Abnormal seedlings in beans include seedlings without a terminal bud or growing point of the stem ("bald-heads") and seedlings with both primary leaves absent even though the terminal bud or growing point is present ("snakeheads"). Such abnormal seedlings are not to be included in determining the percentage of germination. Photos 2380, 2400, 2401.
Runner— <i>Phaseolus coc-cineus</i> .	R, S	20-30	5	5 9	

See footnotes at end of table.

TABLE 2.—*Methods of testing for laboratory germination and hard seed—Continued*

Name of seed	Substrata ¹	Tempera-ture ²	First count ³	Final count	Remarks ⁴
<i>Vegetable seed—Continued</i>					
Beet— <i>Beta vulgaris</i> -----	B	°C. 20-30	Days 3	Days 14	Soak in water 2 hours before testing, using at least 250 cc. water per 100 "seeds"; wash in running water after soaking and blot surface dry. Samples producing darkened radicles should be retested in sand or soil or by washing in running water for 3 hours and testing on 0.3-inch thick "Kimpak" keeping seed covered with slightly moist blotters.
Broccoli— <i>Brassica oleracea</i> var. <i>botrytis</i> .	B, P	20-30	3	10	Dormant seed light, KNO_3 , ⁶ prechill at 5° or 10° C. for 3 days. ⁷
Brussels sprouts— <i>Brassica oleracea</i> var. <i>gemmifera</i> .	B, P	20-30	3	10	Do.
Cabbage— <i>Brassica oleracea</i> var. <i>capitata</i> .	B, P	20-30	3	10	Do.
Cardoon— <i>Cynara cardunculus</i>	T	20-30	7	21	
Carrot— <i>Daucus carota</i> -----	B	20-30	6	28	
Cauliflower— <i>Brassica oleracea</i> var. <i>botrytis</i> .	B, P	20-30	3	10	Do.
Celeriac— <i>Apium graveolens</i> var. <i>rapaceum</i> .	P, TB	20-30	10	21	Light. If injury to roots is apparent use Whatman's No. 2 filter paper or equivalent as substratum.
Celery— <i>Apium graveolens</i> var. <i>dulce</i> .	P, TB	20-30	10	21	Light; fresh and dormant seed KNO_3 , ⁶ and prechill at 10° C. for 3 days. ⁷ If injury to roots is apparent use Whatman's No. 2 filter paper or equivalent as substratum.
Chicory— <i>Cichorium intybus</i> --	P, TS	20-30	5	14	Light, KNO_3 , ⁵ or soil. If injury to roots is apparent use Whatman's No. 2 filter paper or equivalent as substratum. Photo 2504.
Citron— <i>Citrullus vulgaris</i> ----	T	20-30	7	14	Soak 6 hours; test dormant seed at 30° C.
Collards— <i>Brassica oleracea</i> var. <i>acephala</i> .	B, P	20-30	3	10	Dormant seed light, KNO_3 , ⁶ prechill at 5° or 10° C. for 3 days. ⁷
Corn, sweet— <i>Zea mays</i> -----	R, S	20-30	4	7	Photos 2510, 2511, 2512, 2514.
Cornsalad— <i>Fetticus—Valerianella locusta</i> var. <i>olitoria</i> .	B	20	7	28	Fresh and dormant seed 10° or 15° C.
Cowpea— <i>Vigna sinensis</i> -----	R, S	20-30	5	8	Watch for weevil injury to plumule. Photos 1989, 1990, 2377.
Cress:					
Garden— <i>Lepidium sativum</i> .	B, P	20	4	10	Dormant seed 15° C. and light.
Water— <i>Rorippa nasturtium-aquaticum</i> .	P	20-30	4	14	Light.
Cucumber— <i>Cucumis sativus</i> ..	T, S, B	20-30	3	7	Keep substrata somewhat drier than they are maintained for the average kind of seed.
Dandelion— <i>Taraxacum officinale</i> .	P, TB	20-30	7	21	Light. If injury to roots is apparent use Whatman's No. 2 filter paper or equivalent as substratum.
Eggplant— <i>Solanum melongena</i> var. <i>esculentum</i>	TB	20-30	7	14	Alternate method: Test between blotters with raised covers by folding up edges of bottom to form a good support for top or cover, so top will not make contact with seed.
Endive— <i>Cichorium endivia</i> ...	P, TS	20-30	5	14	Light, KNO_3 , ⁶ or soil; dormant seed add about $\frac{1}{8}$ inch of tap water at beginning of test; remove the excess water after 24 hours. If injury to roots is apparent use Whatman's No. 2 filter paper or equivalent as substratum.
Kale— <i>Brassica oleracea</i> var. <i>acephala</i> .	B, P	20-30	3	10	Dormant seed light, KNO_3 , ⁶ prechill at 5° or 10° C. for 3 days. ⁷
Kohlrabi— <i>Brassica oleracea</i> var. <i>gongylodes</i> .	B, P	20-30	3	10	Do.
Leek— <i>Allium porrum</i> -----	B	20	6	14	
Lettuce— <i>Lactuca sativa</i> -----	P	20	None	7	Light for at least $\frac{1}{2}$ hour; fresh and dormant seed prechill at 10° or 15° C. for 3 days; watch for sprouts with both spotted cotyledons and stubby radicles. ⁷ Photos 2417, 2418.

See footnotes at end of table.

TABLE 2.—*Methods of testing for laboratory germination and hard seed--Continued*

Name of seed	Substrata ¹	Tempera-ture ²	First count ³	Final count	Remarks ⁴
		°C.	Days ⁴	Days ⁴	
Vegetable seed—Continued					
Muskmelon— <i>Cucumis melo</i> —	B, T, S	20-30			Keep substrata somewhat drier than they are maintained for the average kind of seed.
Mustard:					
India— <i>Brassica juncea</i> —	P	20-30	3	7	Light; fresh and dormant seed KNO_3 , ⁶ and prechill at 10° C. for 3 days. ⁷
Spinach— <i>Brassica perviri-dis</i> .	B	20-30	3	7	
Okra— <i>Hibiscus esculentus</i> —	R	20-30	4	21	
Onion— <i>Allium cepa</i> —	B, S	20	6	10	In sand and soil tests extend final count to 12 days. Photos 1962, 2253, 2254, 2328, 2330, 2340, 2341, 2469.
Pak-choi— <i>Brassica chinensis</i> —	B	20-30	3	7	
Parsley— <i>Petroselinum hor-tense</i> .	B	20-30	11	28	
Parsnip— <i>Pastinaca sativa</i> —	B	20-30	6	28	
Peas, garden— <i>Pisum sativum</i> —	R, S	20	5	8	Photos 2492, 2498, 2499, 2500.
Pepper— <i>Capsicum</i> spp.—	TB	20-30	6	14	Alternate method: Test between blotters with raised covers by folding up edges of bottom to form a good support for top or cover, so top will not make contact with seed.
Pe-tsai (Chinese cabbage)— <i>Brassica pekinensis</i> .	B	20-30	3	7	
Pumpkin— <i>Cucurbita pepo</i> —	T, S	20-30	4	7	Keep substrata somewhat drier than they are maintained for the average kind of seed.
Radish— <i>Raphanus sativus</i> —	B	20	4	6	Classify as abnormal all seedlings with 50% or more of the area of the cotyledons covered with spots or darkened areas.
Rhubarb— <i>Rheum rhabonticum</i> —	TS	20-30	7	21	Light.
Rutabaga— <i>Brassica napus</i> var. <i>napobrassica</i> .	B	20-30	3	14	
Salsify— <i>Tragopogon porrifolius</i>	T	20	5	10	Prechill fresh and dormant seed at 10° C. for 3 days. ⁷
Sorrel— <i>Rumex acetosa</i> —	TS, P	20-30	3	14	Light. Test dormant seed at 15° C.
Soybean (vegetable)— <i>Glycine max</i> .	R, S	20-30	5	8	Photos 2371, 2372, 2378.
Spinach:					
Common— <i>Spinacia oleracea</i> .	TB	10	7	21	Keep substrata somewhat drier than they are maintained for the average kind of seed.
New Zealand— <i>Tetragonia expansa</i> .	TS, B	10-30	5	28	Keep substrata somewhat drier than they are maintained for the average kind of seed. Alternate method: Remove pulp and test at 15° C. between blotters.
Squash— <i>Cucurbita moschata</i> and <i>C. maxima</i> .	T, S	20-30	4	7	Keep substrata somewhat drier than they are maintained for the average kind of seed.
Swiss chard— <i>Beta vulgaris</i> var. <i>cicla</i> .	B	20-30	3	14	Soak in water 2 hours before testing, using at least 250 cc. water per 100 "seeds"; wash in running water after soaking and blot surface dry. Samples producing darkened radicles should be retested in sand or soil or by washing in running water for 3 hours and testing on 0.3-inch thick "Kimpak," keeping seed covered with slightly moist blotters.
Tomato:					
Common— <i>Lycopersicon esculentum</i> .	B	20-30	5	14	Dormant seed light and KNO_3 , ⁶ Alternate method: Test between blotters with raised covers by folding up edges of bottom to form a good support for top or cover, so top will not make contact with seed. Photo 2513.
Husk— <i>Physalis pubescens</i> .	P, TB	20-30	7	28	Light.

See footnotes at end of table.

TABLE 2.—*Methods of testing for laboratory germination and hard seed—Continued*

Name of seed	Substrata ¹	Tempera-ture ²	First count ³	Final count	Remarks ⁴
<i>Vegetable seed—Continued</i>					
Turnip— <i>Brassica rapa</i>	B	°C. 20-30	Days 3	Days 7	
Watermelon— <i>Citrullus vul-garis</i> .	T, S	20-30	4	14	Keep substrata somewhat drier than they are maintained for the average kind of seed.

¹ Substrata: B=between blotters; TB=top of blotters; T=between folded paper toweling; R=rolled towels; S=soil or sand; TS=top of soil; P=covered petri dishes with (a) 2 layers of blotters; or (b) 1 layer of absorbent cotton; or (c) 5 layers of paper toweling; or (d) filter paper; or (e) $\frac{3}{8}$ -inch layer of sand or soil; C=creped cellulose paper wadding (0.3-inch thick Kimpak or equivalent) covered with a single thickness of blotter through which holes are punched for the seed which are pressed for about $\frac{1}{2}$ their distance into the creped paper wadding.

² Temperature: A single numeral indicates a constant temperature. 2 numerals separated by a dash indicate an alternation of temperature; the test is held at the first temperature for approximately 16 hours and at the second temperature for approximately 8 hours per day. If tests are not subjected to alternating temperatures over week ends and on holidays they are to be held at the lower temperature during such time.

³ The number of days stated for the first count is approximate and a deviation of 1 to 3 days is permitted.

⁴ Photo numbers identify photographs of some types of normal and abnormal seedlings. These photographs may be purchased from Information Branch, PMA, U. S. Department of Agriculture, Washington 25, D. C.

⁵ Hard seeds often present. If at the end of the germination period there are still present swollen seeds or seeds which have just started to germinate all seeds or seedlings except the above-stated shall be removed and the test continued for 5 additional days and the normal seedlings included in the percentage of germination.

⁶ A two-tenths (0.2) percent solution of potassium nitrate (KNO_3) is used in moistening the substratum in all instances except for Canada and Kentucky bluegrass and is prepared by dissolving 2 grams of KNO_3 in 1,000 cc. of distilled water. A one-tenth (0.1) percent solution is prepared by dissolving 1 gram of KNO_3 in 1,000 cc. of distilled water.

⁷ The prechilling period is not included in the germination period given in this table unless otherwise specified.

TOLERANCES

201.59 Application.—The following tolerances shall be recognized between the percentages or rates of occurrence found by analysis, test, or examination in the administration of the act and percentages or rates of occurrence required or stated as required by the act. Unless otherwise provided, the tolerances shall be determined by applying the formulae to the percentages or rates of occurrence found in the administration of the act.

201.60 Purity percentages.—In the determination of the tolerance for the percentage of the distinguishable kind, type, or variety (pure seed), weed seeds, other crop seeds, and inert matter, the sample shall be first considered as made up of two parts: (a) The percentage of the component (pure seed, weed seed, crop seed or inert matter as the case may be) being considered, and (b) the difference between that percentage and 100. The number represented by (a) is then multiplied by the number represented by (b) and the product is divided by 100. The resulting number is then multiplied by 0.2 ($\frac{2}{10}$) and the resulting product added to 0.2 or 0.6 as indicated in the following formulae:

$$\text{Pure seed tolerance} = 0.6 + \left(0.2 \times \frac{a \times b}{100} \right)$$

$$\text{Weed seeds, other crop seeds, and inert matter tolerance} = 0.2 + \left(0.2 \times \frac{a \times b}{100} \right)$$

An additional tolerance shall be allowed for the following kinds of seeds and mixtures containing any of these kinds of seeds singly or combined in excess of 50 percent. The tolerance is to be obtained by adding to the regular tolerance mentioned above the product obtained by multiplying the regular tolerance by the lesser of "a" and "b" divided by 100.

Agrostis spp.	Oatgrass, tall.
Andropogon spp.	Orchard grass.
Bermuda grass.	Panic grass, blue.
Bouteloua spp.	Poa spp.
Brome grass.	Rhodes grass.
Buffalo grass.	Ricegrass, Indian.
Carpet grass	Sweet vernalgrass.
Dallis grass.	Switch grass.
Festuca spp.	Vasey grass.
Guinea grass.	Velvet grass.
Indian grass, yellow.	Wheatgrass, crested.
Meadow foxtail.	Wheatgrass, Western.
Molasses grass.	Wild-rye, Canada.

201.61 Germination.—The following tolerances are applicable to the percentage of germination and also to the sum of the germination plus the hard seed when 400 or more seeds are tested.

Found by test:

	Tolerance
96 or over	5
90 or over but less than 96	6
80 or over but less than 90	7
70 or over but less than 80	8
60 or over but less than 70	9
Less than 60	10

When only 200 seeds of a component in a mixture are tested 2 percent shall be added to the above germination tolerances.

201.62 Pure live seed.—The tolerance for pure live seed shall be determined by applying the respective tolerances to the germination plus the hard seed and the pure seed.

201.63 Noxious-weed seeds in interstate commerce.—The following tolerances for rates of occurrence of noxious-weed seeds shall be recognized and shall be applied to the number of noxious-weed seeds found by analysis in the quantity of seeds specified for noxious-weed seed determinations in section 201.46 and section 201.52. Representations showing the rate of occurrence indicated in columns 2 and 4 will be considered within the tolerance if no more than the accompanying number in columns 1 and 3 are found by analysis in the administration of the act. For rates of occurrence higher than those shown in the table and in case of additional or more extensive analyses, a tolerance based on a degree of certainty of 5 percent ($P=0.05$) will be recognized.

Number found by analysis	The following are within the tolerance	Number found by analysis	The following are within the tolerance
2	0	18	11
4	1	20	12
6	2	21	13
8	3	22	14
9	4	23	15
11	5	24	16
12	6	25	17
13	7	27	18
14	8	28	19
16	9	29	20
17	10	30	21

201.64 Noxious-weed seeds in imported seed.—The tolerance applicable to the rate of occurrence of noxious-weed seeds in imported seeds shall be six-tenths of the permissible number of seeds.

201.64a Fluorescence test and 400- to 1,000-seed separations.—The following table of tolerances shall be used for fluorescence tests on ryegrass and 400- to 1,000-seed separations in addition to one-half the regular pure seed tolerance provided for in section 201.60.

[Tolerance]

Number of seeds used	400	800	1,000	Number of seeds used	400	800	1,000
Result of test percent:				Result of test percent—Con.			
100				49	6.9	6.0	5.8
99	1.0	0.9	0.9	48	6.9	6.0	5.8
98	1.6	1.4	1.4	47	6.9	6.0	5.8
97	2.0	1.8	1.8	46	6.9	6.0	5.8
96	2.3	2.2	2.1	45	6.9	6.0	5.8
95	2.6	2.4	2.4	44	6.9	6.0	5.8
94	2.9	2.7	2.6	43	6.9	6.0	5.8
93	3.2	2.9	2.8	42	6.9	6.0	5.8
92	3.4	3.1	3.0	41	6.9	5.9	5.7
91	3.6	3.3	3.2	40	6.9	5.9	5.7
90	3.8	3.4	3.3	39	6.8	5.9	5.7
89	4.0	3.6	3.4	38	6.8	5.9	5.7
88	4.1	3.7	3.6	37	6.8	5.9	5.6
87	4.3	3.9	3.8	36	6.8	5.8	5.6
86	4.5	3.9	3.9	35	6.7	5.8	5.6
85	4.7	4.1	4.0	34	6.7	5.8	5.6
84	4.8	4.2	4.1	33	6.7	5.7	5.5
83	4.9	4.3	4.2	32	6.6	5.7	5.4
82	5.0	4.4	4.3	31	6.6	5.6	5.4
81	5.2	4.5	4.4	30	6.5	5.6	5.4
80	5.3	4.7	4.5	29	6.5	5.6	5.3
79	5.4	4.7	4.6	28	6.4	5.5	5.3
78	5.5	4.8	4.7	27	6.4	5.4	5.2
77	5.6	4.9	4.8	26	6.3	5.4	5.2
76	5.7	5.0	4.8	25	6.2	5.3	5.1
75	5.8	5.1	4.9	24	6.2	5.2	5.0
74	5.8	5.1	5.0	23	6.1	5.2	4.9
73	5.9	5.2	5.1	22	6.0	5.1	4.9
72	6.0	5.3	5.1	21	5.9	5.0	4.8
71	6.1	5.3	5.2	20	5.8	4.9	4.8
70	6.2	5.4	5.2	19	5.7	4.9	4.7
69	6.2	5.5	5.3	18	5.6	4.8	4.6
68	6.3	5.5	5.3	17	5.5	4.7	4.4
67	6.3	5.6	5.4	16	5.4	4.6	4.4
66	6.4	5.6	5.4	15	5.3	4.5	4.3
65	6.5	5.7	5.4	14	5.2	4.3	4.2
64	6.5	5.7	5.5	13	5.0	4.2	4.0
63	6.5	5.7	5.6	12	4.9	4.1	3.9
62	6.6	5.8	5.6	11	4.7	3.9	3.8
61	6.6	5.8	5.6	10	4.6	3.8	3.6
60	6.7	5.8	5.6	9	4.4	3.6	3.4
59	6.7	5.9	5.7	8	4.2	3.5	3.3
58	6.8	5.9	5.7	7	4.0	3.3	3.1
57	6.8	5.9	5.7	6	3.7	3.1	2.9
56	6.8	5.9	5.7	5	3.5	2.9	2.7
55	6.8	5.9	5.8	4	3.2	2.6	2.4
54	6.9	6.0	5.8	3	2.8	2.3	2.2
53	6.9	6.0	5.8	2	2.4	1.9	1.8
52	6.9	6.0	5.8	1	1.8	1.4	1.4
51	6.9	6.0	5.8	0	1.0	0.5	0.4
50	6.9	6.0	5.8				

EXAMINATIONS IN THE ADMINISTRATION OF THE ACT

201.65 Indistinguishable seed.—When the identification of the kind, variety, or type of seed is not possible by seed characteristics, identification may be based upon the seedling, growing plant, or mature plant characteristics according to such authentic information as is available.

(a) *Ryegrass.*—In determining the proportions of perennial and Italian ryegrass, 400 seeds shall be grown on filter paper and the number of fluorescent seedlings determined under ultraviolet light at the end of the germination period. The percentages of pure ryegrass seed, normal fluorescent seedlings, and normal nonfluorescent seedlings shall be determined and the results shall be subjected to the following formula to calculate the proportion of the two kinds of ryegrass:

$$\text{Percent perennial ryegrass} = \frac{1.0526 \times \text{percent nonfluorescence} \times \text{percent pure ryegrass}}{\text{Percent fluorescence} + \text{percent nonfluorescence}}$$

(b) *Sweetclover*.—In determining the percentage of yellow blossom biennial sweetclover in a mixture of yellow and white blossom biennial sweetclover, 5 grams of seed shall be examined to determine the percentage of mottled seed. The percentage of mottled seed shall be multiplied by 4 and the product shall be construed as representing the percentage of yellow blossom.

201.66 Origin.—The presence of incidental weed seeds, foreign matter, or any other existing circumstances shall be considered in determining the origin of seed.

IMPORTED SEED

201.101 Exemptions.—For the purposes of section 302 (c) (2) of the act, seeds of the following kinds are found to be imported in a substantial proportion for other than seeding purposes and are exempted from the import provisions (title III) of the act when imported for other than seeding purposes: *Provided*, That they are accompanied by declarations when and as required under section 201.222:

Barley.	Oat.
Bean, adzuki.	Parsley.
Bean, field.	Pea, Austrian winter.
Bean, horse or broad.	Pea, field.
Bean, lima.	Peanut.
Bean, mung.	Pepper.
Buckwheat, common.	Proso.
Canary grass.	Pumpkin.
Celery.	Rape, annual.
Chickpea.	Rape, bird.
Corn, field.	Rape, turnip.
Cowpea.	Rice.
Flax.	Rye.
Hemp.	Sorghum.
Lupine.	Soybeans.
Millet, foxtail, German, Hungarian, or golden.	Sunflower.
Mustard.	Watermelon.
Mustard, black.	Wheat.
Mustard, white.	

201.102 Pure live seed.—For the purposes of section 304 (c) of the act, the following percentages for the kinds stated will be construed to meet the import requirements of the act as to pure live seed:

	Percent		Percent
Alfileria	50	Gramma, side oats	10
Artichoke	65	Guinea grass	10
Bahia grass	50	Indian grass, yellow	50
Bluegrass, Poa spp	65	Japanese lawn grass	35
Bluestem, big	25	Leek	65
Bluestem, little	25	Manila grass	35
Bluestem, sand	25	Molasses grass	25
Beets	70	Okra	60
Buffalo grass (burs)	35	Panic grass, blue	50
Cardoon	65	Parsley	65
Carrots	55	Parsnip	65
Celeriac	60	Pepper	65
Celery	60	Rhodes grass	35
Chicory	70	Rhubarb	65
Cress, water	50	Sorrel	65
Dallis grass	35	Spinach, New Zealand	50
Dandelion	65	Switch, grass	35
Dropseed, sand	65	Tomato, husk	60
Eggplant	65	Vasey grass	35
Gramma, blue	35	Wild rye, Canada	50

201.103 Unadapted alfalfa and red clover.—Alfalfa seed and red clover seed of foreign origin other than the Dominion of Canada have been determined to be unadapted for general agricultural use in the United States.

201.104 Staining of imported seed.—(a) 10 percent of the seed in each container of the seed of alfalfa or red clover grown in any foreign country other than the countries of South America and the Dominion of Canada shall be stained red;

(b) 10 percent of the seed in each container of the seed of alfalfa or red clover grown in any of the countries of South America shall be stained orange-red;

(c) 1 percent of the seed in each container of the seed of alfalfa or red clover grown in the Dominion of Canada shall be stained violet;

(d) 10 percent of the seed in each container of the seed of alfalfa or red clover shall be stained red;

(1) If the origin of alfalfa or red clover is unestablished;

(2) If the origin of alfalfa or red clover is such as to require different colors; and

(3) If the alfalfa or red clover of foreign origin has been commingled with the seed of the same kind grown in the United States.

201.105 Method of staining.—The stain shall be in the form of a solution of such concentration as to stain the seeds distinctly with the colors prescribed. The designated portion of the seed to be stained shall be completely and distinctly stained the prescribed color and blended with the unstained seed in accordance with instructions that may be issued from time to time by the Production and Marketing Administration.

201.106 Supervision of staining.—Seed required to be stained and found not to have been stained prior to arrival in the United States shall not be permitted entry until it has been stained under the supervision of an employee or authorized agent of the United States Department of Agriculture. The staining in such case shall be at the expense of the importer, who shall also reimburse the Government for the expenses of travel required to perform such supervision.

201.107 Weed seeds.—Seeds or bulblets of all plants belonging to the following plant families, except those listed as agricultural or vegetable seeds, or recognized as seeds of ornamentals, shall be considered weed seeds when occurring in importations subject to the act.

Aizoaceae—Carpetweed.	Leguminosae—Legume.
Amaranthaceae—Amaranth or pigweed.	Liliaceae—Lily.
Anacardiaceae—Sumac.	Lobeliaceae—Lobelia.
Apocynaceae—Dogbane.	Lythraceae—Loosestrife.
Asclepiadaceae—Milkweed.	Malvaceae—Mallow.
Boraginaceae—Borage.	Nyctaginaceae—Four o'clock.
Campanulaceae—Bluebell.	Onagraceae—Evening-primrose.
Capparidaceae—Caper.	Oxalidaceae—Wood sorrel.
Caryophyllaceae—Pink.	Papaveraceae—Poppy.
Chenopodiaceae—Goosefoot.	Phytolaccaceae—Pokeweed.
Commelinaceae—Spiderwort.	Plantaginaceae—Plantain.
Compositae—Composite or daisy.	Polemoniaceae—Phlox.
Convolvulaceae—Morning-glory.	Polygonaceae—Buckwheat or smartweed.
Crassulaceae—Orpine.	Portulacaceae—Purslane.
Cruciferae—Mustard.	Primulaceae—Primrose.
Cucurbitaceae—Cucurbit.	Ranunculaceae—Buttercup.
Cyperaceae—Sedge.	Resedaceae—Mignonette.
Dipsacaceae—Teasel.	Rosaceae—Rose.
Euphorbiaceae—Spurge.	Rubiaceae—Madder.
Geraniaceae—Geranium.	Scrophulariaceae—Figwort.
Gramineae—Grass.	Solanaceae—Night shade.
Hydrophyllaceae—Waterleaf.	Umbelliferae—Parsley.
Hypericaceae—St.-John's-wort.	Urticaceae—Nettle.
Illecebraceae—Knotweed.	Valerianaceae—Cornsalad.
Iridaceae—Iris.	Verbenaceae—Verbena.
Juncaceae—Rush.	Zygophyllaceae—Caltrop.
Labiatae—Mint.	

The following agricultural and vegetable seeds to be considered weed seeds when occurring incidentally in importations of other agricultural or vegetable seeds:

Barley, wild— <i>Hordeum</i> spp., except <i>vul-</i> <i>gare</i> L.	Oat, wild— <i>Avena</i> spp., except <i>A. sativa</i> L. and <i>A. byzantina</i> C. Koch.
Chicory— <i>Cichorium intybus</i> L.	Rape, annual— <i>Brassica napus</i> var. <i>annua</i> Koch.
Dandelion— <i>Taraxacum officinale</i> Weber.	Rape, bird— <i>Brassica campestris</i> L.
Grass, Bermuda— <i>Cynodon dactylon</i> (L.) Pers.	Rape, turnip— <i>Brassica campestris</i> vars. L.
Grass, velvet— <i>Holcus lanatus</i> L.	Sorrel— <i>Rumex acetosa</i> L.
Mustard— <i>Brassica juncea</i> (L.) Goss.	
Mustard, black— <i>Brassica nigra</i> Koch.	

201.108 Noxious-weed seeds.—Seeds of the following plants shall be considered noxious-weed seeds when in imported seed:

<i>Lepidium draba</i> L., <i>Lepidium repens</i> (Schrenk) Boiss., <i>Hymenophysa pubescens</i> C. A. Mey.—Whitetop.	<i>Sorghum halepense</i> (L.) Pers.—John- son grass.
<i>Cirsium arvense</i> L.—Canada thistle.	<i>Convolvulus arvensis</i> L.—Bindweed.
<i>Cuscuta</i> spp.—Dodder.	<i>Centaurea picris</i> Pall.—Russian knap- weed.
<i>Agropyron repens</i> (L.) Beauv.—Quack- grass.	<i>Sonchus arvensis</i> L.—Perennial sow- thistle.
	<i>Euphorbia esula</i> L.—Leafy spurge.

201.109 Mixtures not considered adulterations.—For the purposes of section 303 of the act the importation of mixtures in any combination of seed of suckling clover (*Trifolium dubium*), white clover (*Trifolium repens*), or cluster clover (*Trifolium glomeratum*) shall not be construed to be adulterated.

RULES OF PRACTICE

201.151 Institution of proceedings.—Any person having information of any violation of the act or of any of the regulations promulgated thereunder may file with the Assistant Administrator for Regulatory and Marketing Service Work, Production and Marketing Administration, an application requesting the Secretary to institute such proceedings as may be authorized under the act. Such application shall be in writing, signed by or on behalf of the applicant, and shall contain a short and simple statement of the facts constituting the alleged violation and the name and address of the applicant and the party complained of. If, after investigation of the matters complained of in the application or after investigation made on his own motion, the Secretary has reason to believe that any person has violated or is violating any of the provisions of the act or the regulations made and promulgated thereunder, he may institute such proceeding as may be authorized by the act.

201.152 Status of applicant.—The person filing an application shall not be a party to any proceeding which may be instituted under the act, unless he be permitted by the Secretary or by the examiner to intervene therein. The Assistant Administrator for Regulatory and Marketing Service Work, Production and Marketing Administration, shall not be required to divulge the name of the applicant and such person will have no legal status in the proceeding which may be instituted, except where allowed to intervene or as such person may be called as a witness. At any time after the institution of the proceeding, and before it has been submitted to the Secretary for final consideration, the Secretary or the examiner may, upon petition in writing and upon good cause shown, permit any person to intervene.

201.153 Docket number.—Each proceeding instituted under the act shall be assigned a docket or file number and thereafter the proceeding shall be referred to by such number.

201.154 Cease and desist proceedings.—(a) *Complaint and notice of hearing.*—If, upon investigation, made either on his own motion or upon application, the Secretary shall have reason to believe that any person has violated or is violating any of the provisions of the act or any of the regulations promulgated thereunder, he may cause a complaint in writing to be served upon such person, as the respondent. The complaint shall state the charges and shall require the respondent to attend and testify at a hearing at a time and place designated in the complaint, the designated time being at least 30 days after date of the service of the complaint. At any time prior to the close of the hearing, the complaint may be amended; but, in case of an amendment adding new provisions, the hearing shall, on the request of the respondent, be adjourned for a period not exceeding 15 days.

(b) *Answer.*—In case of a desire to contest the proceeding, the respondent shall within 20 days from the service of the complaint, file with the hearing clerk an answer to the complaint, in triplicate, signed by the respondent or his attorney. Such answer shall contain a concise statement of the facts which constitute the ground of defense. The respondent shall specifically admit or explain each of the facts alleged in the complaint unless respondent is without knowledge, in which case, respondent shall so state. Failure of the respondent to file an answer within the time above provided, and failure to appear at the time and place fixed for hearing, shall be deemed to authorize the Secretary, without further notice to respondent, to proceed in the regular course on the charges set forth in the complaint.

If the respondent desires to waive hearing on the allegations of fact set forth in the complaint and not to contest the facts, the answer may consist of a statement that respondent admits all the material allegations of fact charged in the complaint to be true. Respondent by such answer shall be deemed to have waived a hearing on the allegations of fact set forth in said complaint and to have authorized the Secretary, without further evidence, or other intervening procedure, to find such facts to be true, and, if in the judgment of the Secretary such admitted facts constitute a violation of law as charged in the complaint, to make and serve upon the said respondent findings as to the facts and an order to cease and desist from continuing such violations. Upon application in writing made contemporaneously with the filing of such answer, the respondent, in the discretion of the Secretary, may be heard on brief, in oral argument, or both, solely on the question as to whether the facts so admitted constitute the violation or violations of law charged in the complaint.

(c) *Conduct of hearing.*—The Secretary shall designate an employee of the Department of Agriculture to act as examiner to conduct the hearing, and such examiner shall have and may exercise all authority granted under section 413 of the act. In the conduct of the hearing, the examiner may rule upon any motion filed, or may reserve the matter for the subsequent ruling of the Secretary. He may rule upon the admissibility of evidence, but he shall admit all relevant and material evidence. The respondent or respondents may appear in person or by counsel and the Department shall be represented by an attorney designated by the Solicitor of the Department. The persons who appear as counsel at the hearing must conform to the standards of ethical conduct required of practitioners before the courts of the United States.

The burden of proof shall be upon the Secretary, as the moving party in the proceeding, and the evidence offered by the Department shall be first presented.

The testimony of the witnesses at the hearing shall be upon oath or affirmation administered by the examiner. Any witness may, in the discretion of the examiner, be examined separately and apart from all other witnesses except those who may be parties to the proceeding. The right of cross-examination shall obtain.

If a party objects to the admission of any evidence, or to the rejection of any evidence, or to the limitation of the scope of any examination or cross-examination, he shall state briefly the grounds of such objection, and the transcript shall not include argument or debate thereon except as ordered by the examiner. Such objections shall be made before the examiner in order to be subsequently relied upon in the proceeding. Ruling by the examiner on such objections shall be a part of the transcript.

A true copy of every written entry in the records of the Department, made by an officer or employee thereof in the course of his official duty, and relevant to the issues involved in the hearing, shall be admissible as *prima facie* evidence of the facts stated therein, without the production of such officer or employee.

The deposition of any witness, taken after reasonable notice to the opposite party or parties and at a time and place and before a person designated for the purpose by the Secretary, or by the examiner, shall be admitted, if the evidence is otherwise admissible.

When practicable to do so, a copy of each exhibit shall be furnished to the opposing party or parties either before or at the time of its introduction.

Judicial notice, on request, will be taken of such matters as are noticed by the courts of the United States.

(d) *Proposed findings of fact, conclusions, and order.*—Within 10 days (unless a longer period of time shall be permitted by the examiner) after the filing of the transcript with the hearing clerk, as provided in paragraph (e) below, any party (including the Department) may file with the hearing clerk proposed

findings of fact, conclusions, and order, based solely on the evidence at the hearing, and briefs in support thereof.

(e) *Filing the transcript of evidence.*—The examiner shall, as soon as practicable after the close of a hearing, notify the hearing clerk of its close and of the time for filing proposed findings of fact, conclusions, and order, and furnish the hearing clerk with such other information as may be necessary. As soon as practicable after the close of the hearing, the examiner shall transmit to the hearing clerk an original and two copies of the transcript of the testimony and the original and all copies of exhibits introduced in evidence at the hearing. He shall attach to the original transcript of the evidence a certificate stating that the transcript is a true transcript of the testimony offered or received at the hearing, except in such particulars as he shall specify, and that the exhibits transmitted are all the exhibits introduced at the hearing, with such exceptions as he shall specify. A copy of such certificate shall be attached to each of the two copies of the transcript of evidence. In accordance with such certificate, the hearing clerk shall note upon the original and each copy of the transcript each correction detailed therein by adding or crossing out at the appropriate place any words necessary to make the text conform to the correct meaning.

(f) *Copies of the transcript of the testimony, etc.*—Any party to the proceeding desiring a copy of the transcript of the testimony or any written exhibit, or proposed findings of fact, or brief, shall be entitled to the same upon application to the hearing clerk and upon payment of fees therefor, as provided by regulation 1532 of the General Regulations, United States Department of Agriculture.

(g) *Examiner's report.*—The examiner, within a reasonable time after the termination of the period allowed for the filing of proposed findings of fact and briefs in support thereof, shall prepare, upon the basis of the evidence received at the hearing, a report containing his tentative findings of fact, conclusions, and order, a copy of which shall be served by the hearing clerk upon each of the parties, including the Department.

(h) *Exceptions.*—Within 20 days after service of the examiner's report (unless the time is extended by the examiner), any party who wishes to take exception to any matter set out in such report shall transmit such exceptions in writing to the hearing clerk, referring to the relevant pages of the transcript, and suggesting a corrected finding of fact. Within the same period of time, each party shall transmit in writing to the hearing clerk a brief statement concerning each of the objections taken to the action of the presiding officer at the hearing, as set out in subsection (c) above, upon which he wishes to rely, referring, where relevant, to the pages of the transcript of evidence. A party, if he files exceptions, shall state in writing whether he desires to make an oral argument thereon before the Secretary.

(i) *Transmittal of record.*—The examiner, immediately following the termination of the period allowed for the filing of exceptions, shall transmit to the Secretary the record of the proceedings. Such record shall include: The pleadings; the transcript of the evidence taken at the hearing; such proposed findings of fact, conclusions, and order, and briefs in support thereof, as may have been filed in connection with the hearing; the examiner's report; and the exceptions filed, if any.

(j) *Oral argument.*—In the event that an oral argument before the Secretary has been duly requested, a date for such argument shall be fixed by the Secretary or by the Under Secretary or the Assistant Secretary, if designated by the Secretary to act in his stead.

(k) *Issuance of final order.*—The Secretary, within a reasonable time after the receipt of the record from the examiner, as provided above, or, in case oral argument was had, within a reasonable time thereafter, will, upon the basis of the record and after due consideration of the same by him, make a report in writing of his findings as to the facts, and he may issue and cause to be served on each of the parties to the proceeding his final order in the proceeding. If oral argument is heard in any proceeding by the Under Secretary or the Assistant Secretary instead of the Secretary, the final order in the proceedings shall be issued by the person who heard the argument and considered the record in connection therewith.

(l) *Rehearing.*—An application for rehearing, reargument, reconsideration, or modification of a final order must be made by petition to the Secretary filed in triplicate with the hearing clerk. The petition must state specifically the grounds relied upon. A copy of any such application filed by a respondent shall be transmitted by the hearing clerk to each of the other parties to the proceed-

ing. The Secretary may, after giving reasonable notice and after allowing a reasonable opportunity to be heard to all parties, amend or set aside his report or order, in whole or in part, provided, however, that the Secretary may take no action to amend or set aside the said report or order after the transcript of record has been filed in a "circuit court of appeals" in accordance with section 410 of the act.

In the event that a rehearing is granted by the Secretary, or a hearing is ordered upon a petition for the modification of a final order, the applicable rules of practice, as set out herein, shall be followed.

(m) *Service—Filing—Docketing.*—All pleadings, proposed findings, reports, exceptions, briefs, or other documents or papers required or authorized by these rules or by the act to be served on any party to a proceeding under this section shall be served by the hearing clerk or by anyone also duly authorized by the Secretary. Said service, if otherwise required, may be dispensed with when the person to be served has made and filed with the hearing clerk a written waiver of such service, which said waiver shall be signed by the person to be charged therewith or by some person thereunto lawfully authorized, and it shall be duly acknowledged before a person authorized by law to administer oaths. The service shall be made either (1) by delivering a copy of the document or paper to the person to be served, or to a member of the partnership to be served, or to the president, secretary, or other executive officer or any director of the corporation to be served; or (2) by leaving a true copy of the document or paper at the principal office or place of business of such person, partnership, or corporation; or (3) by registering and mailing a true copy of the document or paper, addressed to such person, partnership, or corporation at his or its last known principal office or place of business. Proof of service hereunder shall be made by the affidavit of the person who actually made the service, provided that, if the service be made by registered mail, as outlined in (3) above, proof of service shall be made by the return post-office receipt. The affidavit and post-office receipt contemplated hereby shall be filed with the hearing clerk, and the fact of filing thereof shall be noted on the docket of the proceeding.

All pleadings, proposed findings, reports, exceptions, briefs, affidavits showing service, and other papers or documents required or authorized by these rules or by this act to be filed with the Secretary or with the Assistant Administrator for Regulatory and Marketing Service Work, Production and Marketing Administration, in any proceedings within the coverage of this section of the rules of practice shall be filed with the hearing clerk, Office of the Solicitor, United States Department of Agriculture, Washington, D. C.

The hearing clerk shall maintain a docket of and shall assign a number to each proceeding instituted under this section, and, thereafter, the proceeding shall be referred to by such number.

201.155 Proceedings prior to reporting for criminal prosecution.—The Assistant Administrator for Regulatory and Marketing Service Work, Production and Marketing Administration, shall, before any violation of this act is reported by the Secretary to any United States attorney for institution of a criminal proceeding, notify the person against whom such proceeding is contemplated that action is contemplated, inform him regarding the facts involved, and afford him an opportunity to present his views, either orally or in writing, with regard to such contemplated proceeding.

Notice shall be served upon such person in the manner outlined in section 201.154 (m) above.

If the person desires to explain the transaction or otherwise to present his views, he shall file with the Assistant Administrator for Regulatory and Marketing Service Work, Production and Marketing Administration, within 20 days after the service of the notice, an answer, in duplicate, signed by him or by his attorney, or shall request, within the 20 days, an opportunity to express his views orally. The request shall be embodied in a writing signed by the person or by his attorney or agent. Such opportunity to present his views orally shall be afforded at a time and place to be designated by the Assistant Administrator for Regulatory and Marketing Service Work, Production and Marketing Administration, and it shall be given within a time not to exceed 10 days after the date of the filing of the request therefor.

PROCEDURE AS TO HEARINGS, PUBLICATION, ETC.

201.156 Notice and hearing prior to promulgation of rules and regulations.—Prior to the promulgation of any rule or regulation contemplated by section 402 of the act, notice shall be given by publication in the Federal Register of intention to promulgate such rule or regulation and of the time and place of a public hearing to be held with reference thereto. Such hearings shall be conducted by the Secretary of Agriculture or by such employee or employees of the Department of Agriculture as may be designated to preside thereat. The presiding officer shall conduct the hearing in an orderly and informal manner, according to such procedure as he may announce at the commencement of the hearing. Any rule or regulation promulgated under section 402 of the act shall become effective on the date fixed in the promulgation, which date shall be not less than 30 days after publication in the Federal Register. Any rule or regulation may be amended or revoked in the same manner as is provided for its promulgation.

201.157 Publication of judgments and orders.—After judgment by a court, or the issuance of a cease and desist order, in any case or proceeding arising under this act, notice thereof shall be given by publication in Service and Regulatory Announcements of the Department, or by issuing a press release containing any information pertinent to the issuance of the judgment by the court or to the issuance of the cease and desist order, or by such other media as the Assistant Administrator for Regulatory and Marketing Service Work, Production and Marketing Administration, may designate from time to time.

201.158 Proceedings under section 302 (a) to show cause why seed or screenings should be admitted into the United States.—When seed or screenings have been refused admission into the United States under the act or the joint regulations promulgated thereunder, the consignee of such seed or screenings may submit a request to the Assistant Administrator for Regulatory and Marketing Service Work, Production and Marketing Administration, for a hearing in which he may show cause, if any he have, why such seed or screenings should be admitted. Request for such hearing shall be embodied in a writing signed by the owner or consignee or by his attorney or agent. The Assistant Administrator for Regulatory and Marketing Service Work, Production and Marketing Administration, shall thereupon fix, and notify the owner or consignee of, the time, when and place at which the hearing will be held. The hearing shall be conducted in an orderly and informal manner by the Secretary, or by a presiding officer duly designated by him, and it shall be governed by such rules of procedure as the presiding officer shall announce at the opening of the hearing. The determination as to whether the seed or screenings may be admitted into the United States shall be made by the Secretary within a reasonable time after the close of the hearing, and the consignee of the seed or screenings and the Secretary of the Treasury shall be duly notified as to such determination.

201.159 Proceedings under section 305 (b) to determine whether foreign alfalfa or red clover seed is not adapted for general agricultural use in the United States.—The public hearings which shall be held from time to time for the purpose of determining whether seed of alfalfa or red clover from any foreign country or region is not adapted for general agricultural use in the United States shall be conducted by the Secretary, or by a presiding officer duly designated by him. Such hearings shall be conducted in an orderly and informal manner in accordance with such procedure as the presiding officer shall announce at the opening of each hearing. The Secretary shall, within a reasonable time after the close of the public hearing, make and publish his determination as to whether the said seed is adapted for general agricultural use in the United States. Publication of the determination shall be made in the Federal Register, and through such other media as the Secretary may deem appropriate.

JOINT RULES AND REGULATIONS OF THE SECRETARY OF AGRICULTURE AND THE SECRETARY OF THE TREASURY FOR THE ENFORCEMENT OF THE FEDERAL SEED ACT OF AUGUST 9, 1939

(Title 7, Ch. I, Pt. 201 of the Code of Federal Regulations) (Treasury Decision Nos. 50071, 50458, 51363, and 52347)

CONTENTS

	Page		Page
Definitions	33	Evidence as to country or region where seed was grown	35
201.201 Agricultural seeds	33	201.220 Certificate or declaration of origin	35
201.202 Vegetable seeds	33	Exemptions and declarations	36
201.203 Screenings	33	201.221 Shipments through United States	36
201.204 Production and Marketing Administration	33	201.222 Declaration of purpose	36
201.205 Collector of customs	33	Screenings	36
201.206 Pure live seed	33	201.223 Screenings prohibited entry	36
201.207 Other definitions	33	201.224 Screenings permitted entry	36
Sampling	33	Seed adulterated or unfit for seeding purposes	36
201.208 Seed	33	201.225 Cleaning or processing	36
201.209 Screenings	34	201.226 Destruction of refuse	37
201.210 Method of sampling	34	201.227 Report to collector of customs	37
201.211 Bulk	34	Misbranded seed	37
201.212 Bags	34	201.228 Correction of labeling	37
201.213 Size of sample	34	Mixing seed	37
201.214 Sealing and identifying samples	34	201.229 Prohibition against and exception	37
201.215 Statement to accompany samples	34	Rejected seed or screenings	37
201.216 Forwarding samples	34	201.230 Exportation or destruction	37
201.217 Notice to consignee	34	Procedure as to public hearings	38
201.218 Delivery under bond	34	201.231 Notice and hearing prior to promulgation of rules and regulations	38
201.219 Notice of removal	35		

DEFINITIONS

201.201 Agricultural seeds.—The term "agricultural seeds" means those seeds so defined in the regulations of the Secretary of Agriculture.

201.202 Vegetable seeds.—The term "vegetable seeds" means those seeds so defined in the regulations of the Secretary of Agriculture.

201.203 Screenings.—The term "screenings" means chaff, sterile florets, immature seed, weed seed, inert matter, and any other materials removed in any way from any seeds in any kind of cleaning or processing and which contains less than 25 percent of live agricultural or vegetable seeds.

201.204 Production and Marketing Administration.—The term "Production and Marketing Administration" means the Production and Marketing Administration of the United States Department of Agriculture.

201.205 Collector of customs.—The term "collector of customs" includes any person authorized under the customs laws and regulations to perform the duties of a collector of customs.

201.206 Pure live seed.—The term "pure live seed" means the product of the percentage of germination plus the hard seed and the percentage of pure seed, divided by 100.

201.207 Other definitions.—The definitions for the purposes of title III of the Federal Seed Act shall include all other definitions in the regulations of the Secretary of Agriculture under the act.

SAMPLING

201.208 Seed.—The collector of customs shall draw and forward samples of all seed imported or offered for importation into the United States except the following kinds which he shall sample only when imported for seeding purposes and when declared for seeding purposes:

Barley.	Buckwheat, common	Cowpea.	Rice.
Bean, adzuki.	Canary grass.	Flax.	Rye.
Bean, field.	Celery.	Hemp.	Soybean.
Bean, lima.	Chickpea.	Oat.	Sunflower.
Bean, mung.	Corn, field.	Peanut.	Wheat.

201.209 Screenings.—The collector of customs shall upon request received prior to importation from the Assistant Administrator for Regulatory and Marketing Service Work, Production and Marketing Administration, draw and forward samples of all screenings imported or offered for importation into the United States.

201.210 Method of sampling.—(a) In order to secure a representative sample, equal portions shall be taken from evenly distributed parts of the quantity of seed or screenings to be sampled. Access shall be had to all parts of that quantity.

(b) For free-flowing seed in bags or bulk, a probe or trier shall be used. For small free-flowing seed in bags a probe or trier long enough to sample all portions of the bag should be used.

(c) Non-free-flowing seed, such as grass seed, uncleared seed, or screenings, difficult to sample with a probe or trier, shall be sampled by thrusting the hand into the bulk and withdrawing representative portions.

(d) The portions shall be combined into a composite sample except that if the quantity represented to be a lot does not appear to be of uniform quality as required in paragraph (e) of this section the separate portions shall be forwarded together but without being combined into a composite sample.

(e) A quantity of seed designated as one lot shall be regarded as such for sampling only if every portion or bag of seed in the quantity is uniform within permitted tolerances as to percentage of pure seed, percentage of germination and hard seed, percentage of weed seed, and rate of occurrence of noxious weed seeds.

(f) When an importation consists of more than one lot, each lot shall be sampled separately.

(g) Sampling shall not proceed unless each container is stenciled or labeled in such manner as clearly to identify the container with the lot designation and such varietal identification as may appear in the invoice or other entry papers.

201.211 Bulk.—Bulk seeds or screenings shall be sampled by inserting a long probe or thrusting the hand into the bulk as circumstances require in at least seven uniformly distributed parts of the quantity being sampled.

201.212 Bags.—(a) When an importation consists of five bags or less each bag shall be sampled.

(b) When an importation consists of more than five bags, every fifth bag but not less than five bags shall be sampled.

201.213 Size of sample.—Samples of agricultural seed shall be not less than 1 quart. Samples of screenings shall be not less than 2 quarts. Samples of vegetable seed shall be not less than 1 pint, except that samples of one-fourth pint will be sufficient from importations of 5 pounds or less. Unused portions of samples of rare or expensive seeds will be returned by the Production and Marketing Administration upon request of the importer.

201.214 Sealing and identifying samples.—Before being forwarded for analysis, test, or examination, the container of each sample shall be properly sealed, and identified in accordance with section 201.215.

201.215 Statement to accompany samples.—All samples shall be accompanied by a description of the lot of seed offered for importation, on a form provided for this purpose by the Department of Agriculture.

201.216 Forwarding samples.—Samples from the various ports shall be forwarded to seed laboratories in accordance with instructions of the Production and Marketing Administration to be furnished to customs officers from time to time.

201.217 Notice to consignee.—The collector of customs shall immediately notify the owner or consignee that samples of seeds or screenings have been drawn and that the shipment shall be held intact pending a decision of the Production and Marketing Administration in the matter.

201.218 Delivery under bond.—After samples of seed or screenings offered for importation into the United States from any foreign country have been drawn, such seed or screenings shall be admitted into the commerce of the United States only after the seed or screenings have been found to meet the requirements of the act and these regulations: *Provided, however,* That if each and every container of such seed or screenings is stenciled or labeled to show the name of the kind or variety of the seed and a lot number or designation identifying the lot of seed, collectors of customs may release from customs custody for delivery to the owner or consignee shipments which have been sampled, pending examina-

tion and decision in the matter, upon the execution on the appropriate form of either a customs single-entry bond or a customs term bond in such amount as is prescribed for such bond in customs regulations in force on date of entry, which bond shall contain a condition for the redelivery of the seed or screenings or any part thereof upon demand of the collector of customs at any time. Prior to being so admitted, the seed or screenings shall be kept intact and not tampered with in any way, or removed from the containers except under supervision as provided by regulation. The bond shall be filed with the collector of customs, who, in case of default, shall take appropriate action to effect the collection of liquidated damages equal to the value of the entire shipment as set forth in the entry plus the estimated duty thereon, if any.

201.219 Notice of removal.—The owner or consignee shall keep the Production and Marketing Administration informed as to the location of seed or screenings subject to the act, after sampling by the collector of customs but before being finally admitted into the commerce of the United States.

EVIDENCE AS TO COUNTRY OR REGION WHERE SEED WAS GROWN

201.220 Certificate or declaration of origin.—(a) A certificate, attached to the invoice, of the properly authorized official of the foreign country in which the seed was grown, to the effect that the seed of alfalfa or red clover or any mixture of seeds containing 10 percent or more of either or both of such seeds was grown in that country, will be regarded as *prima facie* evidence of such fact. This certificate shall be in the following form.

CERTIFICATE OF ORIGIN BY FOREIGN OFFICIAL

City _____, Country _____, date _____

I, _____, hereby certify
(Name of official)

that the seed contained in _____ bags, marked _____, described in invoice _____
(Number or date)
to which this certificate is attached, was grown in _____
(Name of country or countries or part thereof)

(Name of official)

(Official title)

(b) A declaration of the shipper attached to the invoice stating the country in which the seed of alfalfa or the seed of red clover or any mixture of seeds containing 10 percent or more of either or both of such seeds was grown will be regarded as *prima facie* evidence of such fact. The declaration shall be in the following form:

DECLARATION OF ORIGIN BY SHIPPER

City _____, Country _____, date _____

I, the undersigned _____, the shipper of the seed contained in _____ bags, marked _____, described in invoice _____, to which this declaration is attached, do hereby certify
(Number or date)

that such seed was grown in _____
(Name of country or countries or part thereof)

(Signature)

(c) If the information contained in the certificate or declaration provided for in paragraphs (a) and (b) of this regulation is not sufficient to establish the country or region of origin of the seed, or if the consular invoice is not accompanied by such certificate or declaration, other evidence as to the origin may be considered, or the seed may be permitted entry after being stained 10 percent red.

EXEMPTIONS AND DECLARATIONS

201.221 Shipments through United States.—Seed shipped in bond through the United States is not subject to the import requirements of the act.

201.222 Declaration of purpose.—(a) Entries covering all importations of seed of—

Bean, horse or broad	Pea, field
Lupine	Pepper
Millet, foxtail, German, Hungarian, and golden	Proso
Mustard	Pumpkin
Mustard, black	Rape, annual
Mustard, white	Rape, bird
Parsley	Rape, turnip
Pea, Austrian winter	Sorghum
	Watermelon

shall contain a statement by the importer setting forth the use for which imported. When imported for seeding purposes such seed is subject to the import provisions of the act.

(b) Entries covering all importations for seeding purposes of seed of—

Barley	Cowpea
Bean, adzuki	Flax
Bean, field	Hemp
Bean, lima	Oat
Bean, mung	Peanut
Buckwheat, common	Rice
Canary grass	Rye
Celery	Soybean
Chickpea	Sunflower
Corn, field	Wheat

shall contain a statement by the importer that such seed is for seeding purposes and such seed is subject to the import requirements of the act.

(c) If any seed enumerated in section 201.222 is declared for seeding purposes and is found upon examination by the Production and Marketing Administration not to meet the requirements of the Federal Seed Act, the importer shall be permitted to withdraw his declaration made under section 201.222 upon notification from the Production and Marketing Administration that the seed may be released for feeding or manufacturing purposes. In this event, the importer shall be required to file a new declaration that no part of the importation will be used for seeding purposes.

(d) The collector of customs shall notify the Department of Agriculture of any change in the nature of a declaration made under this section.

SCREENINGS

201.223 Screenings prohibited entry.—Screenings of all seed subject to the Federal Seed Act are prohibited entry into the United States except as provided under section 201.224.

201.224 Screenings permitted entry.—Screenings of wheat, oats, rye, barley, buckwheat, field corn, sorghum including broomcorn, flax, millet, Proso, soybeans, cowpeas, field peas, and field beans may be imported, provided such screenings are not imported for seeding purposes and are so declared by the words "screenings for processing, not for seeding" in the invoice or other papers required to be presented to the collector of customs.

SEED ADULTERATED OR UNFIT FOR SEEDING PURPOSES

201.225 Cleaning or processing.—Seed which is found under the provisions of the act to be adulterated or unfit for seeding purposes may be cleaned or processed under the supervision of an employee or authorized agent of the United States Department of Agriculture. The cleaning or processing shall be at the expense of the importer who shall also reimburse the Government for the expenses of travel required to perform such supervision. The identity of the seed shall be maintained at all times to the satisfaction of the persons supervising the cleaning

or processing. The refuse from such cleaning shall be placed in containers and securely sealed and identified. If upon analysis, test, or examination of a representative sample of the cleaned seed, it is found that the requirements of the act have been met, that portion of the seed may be admitted.

201.226 Destruction of refuse.—The refuse from such cleaning shall be destroyed under the supervision of an employee or authorized agent of the United States Department of Agriculture. The destruction of refuse shall be at the expense of the importer who shall also reimburse the Government for the expenses of travel required to perform such supervision.

201.227 Report to collector of customs.—A report of the cleaning and processing and the destruction of the refuse, stating the amount by weight in each instance, shall be submitted to the collector of customs at the port of entry of such seed by the Production and Marketing Administration.

MISBRANDED SEED

201.228 Correction of labeling.—Seed being imported or offered for importation, the labeling of which is false or misleading in any respect, shall be refused admission into the commerce of the United States until such labeling has been corrected to meet the requirements of the act and the rules and regulations.

Any correction of the labeling upon the containers shall be done under the supervision of the Department of Agriculture at the expense of the importer who shall also reimburse the Government for the expenses of travel required to perform such supervision. When a representative of the Department of Agriculture finds upon examination of seed that it is incorrectly described on the invoice presented at the time of entry, a finding of "false labeling" under the Federal Seed Act of August 9, 1939, will be made. The seed will be refused admission until after the importer has given satisfactory assurance to the Department of Agriculture that he has taken appropriate steps to file with the collector of customs at the port of entry a corrected customs invoice describing the seed in terms which will not constitute "false labeling." Upon receipt of such assurance, the Department of Agriculture will notify the collector of the nature of the "false labeling" and that the seed may be granted admission under the Federal Seed Act. The importer will be liable for the payment of liquidated damages under the bond filed in connection with the entry unless a corrected customs invoice is produced within the time provided for by law or regulations.

MIXING SEED

201.229 Prohibition against and exception.—Mixing any seed or screenings with a lot or shipment of seed or screenings offered for entry which has been found to be in violation of the act or these regulations is prohibited, except that in cases where it shall appear to the satisfaction of the Assistant Administrator for Regulatory and Marketing Service Work, Production and Marketing Administration, that two or more such lots or shipments of seed or screenings offered for entry are of substantially the same quality and origin, they may be mixed for the purpose of recleaning upon a written permit from the Assistant Administrator for Regulatory and Marketing Service Work, Production and Marketing Administration.

REJECTED SEED OR SCREENINGS

201.230 Exportation or destruction.

(a) Seed or screenings refused admission into the commerce of the United States shall be exported by the owner or consignee within 12 months of the date of notice of such refusal or at the expiration of such 12-month period the rejected seed or screenings shall be destroyed under the supervision of an employee or authorized agent of the United States Department of Agriculture in such manner as may be determined by the United States Department of Agriculture.

(b) When seed or screenings which have been refused admission into the commerce of the United States are exported the collector of customs shall notify the office of the United States Department of Agriculture that issued the notice of rejection and shall also submit to said office a sample drawn from the seed at the time of exportation.

(c) The destruction of seed or screenings refused admission shall be at the expense of the owner or consignee who shall also reimburse the Government for the expense of travel required to perform such supervision. The United States Department of Agriculture shall make a report of such destruction giving the amount by weight to the collector of customs at the port of entry of such seed or screenings.

PROCEDURE AS TO PUBLIC HEARINGS

201.231 Notice and hearing prior to promulgation of rules and regulations.— Prior to the promulgation of any rule or regulation contemplated by section 402 (b) of the act, notice shall be given by publication in the Federal Register of intention to promulgate such rule or regulation and of the time and place of a public hearing to be held with reference thereto. Such hearing shall be conducted by the Secretary of the Treasury and the Secretary of Agriculture, acting jointly or severally, or by such employee or employees of the Department of Agriculture or of the Department of the Treasury, as the case may be, as may be designated to preside thereat. The presiding officer shall conduct the hearing in an orderly and informal manner, according to such procedure as he may announce at the commencement of the hearing. Any rule or regulation promulgated under section 402 (b) of the act shall become effective on the date fixed in the promulgation, which date shall be not less than 30 days after publication in the Federal Register. Any rule or regulation may be amended or revoked in the same manner as is provided for its promulgation.

FEDERAL SEED ACT

Approved August 9, 1939 (53 Stat. 1275)

AN ACT

To regulate interstate and foreign commerce in seeds; to require labeling and to prevent misrepresentation of seeds in interstate commerce; to require certain standards with respect to certain imported seeds; and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Federal Seed Act."

TITLE I—DEFINITIONS

SEC. 101. (a) When used in this Act—

(1) The term "United States" means the several States, Alaska, District of Columbia, Hawaii, and Puerto Rico.

(2) The term "person" includes a partnership, corporation, company, society, or association.

(3) The term "interstate commerce" means—

(A) commerce between any State, Territory, possession, or the District of Columbia, and any other State, Territory, possession, or the District of Columbia; or

(B) commerce between points within the same State, Territory, or possession, or the District of Columbia, but through any place outside thereof; or

(C) commerce within the District of Columbia.

(4) For the purposes of this Act with respect to labeling for variety and origin (but not in anywise limiting the foregoing definition), seeds shall be considered to be in interstate commerce, or delivered for transportation in interstate commerce, if such seeds are part of, or delivered for transportation in, that current of commerce usual in the transportation and/or merchandising of seeds, whereby such seeds are sent from one State with the expectation that they will end their transit in another, including, in addition to cases within the above general description, all cases where seeds are transported or delivered for transportation to another State, or for processing or cleaning for seeding purposes within the State and shipment outside the State of the processed or cleaned seeds. Seeds normally in such current of commerce shall not be considered out of such current through resort being had to any means or device intended to remove transactions in respect thereto from the provisions of this Act.

(5) The term "foreign commerce" means commerce between the United States, its possessions, or any Territory of the United States, and any foreign country.

(6) (a) The term "district court of the United States" means any court exercising the powers of a district court of the United States.

(b) The term "circuit court of appeals," in case the principal place of business or the place of residence of a person against whom a cease and desist order is issued is in the District of Columbia, includes the Court of Appeals of the District of Columbia.

(7) The term—

(A) "Agricultural seeds" shall include grass, forage, and field crop seeds, as follows:

Agropyron cristatum (L.) Beauv.—Crested wheatgrass.

Agropyron pauciflorum (Schwein.) Hitchc.—Slender wheatgrass.

Agropyron smithii Rydb.—Bluestem.

Agrostis alba L.—Redtop.

Agrostis canina L.—Velvet bent.

Agrostis palustris Huds.—Creeping bent.

Agrostis spp.—Bentgrasses.

Avena spp.—Oat.

Beta vulgaris L.—Field beet, excluding sugar beet.

Brassica napus L.—Winter rape.

Bromus inermis Leyss.—Smooth brome.

Chloris gayana Kunth.—Rhodes grass.

Cynosurus cristatus L.—Crested dogtail.
Dactylis glomerata L.—Orchard grass.
Echinochloa crusgalli frumentacea (Roxb.) Wight.—Japanese millet.
Fagopyrum vulgare Hill.—Common buckwheat.
Festuca spp.—Fescue.
Gossypium spp.—Cotton.
Hordeum spp.—Barley.
Lespedeza sericea (Thunb.) Miq.—Chinese lespedeza.
Lespedeza stipulacea Maxim.—Korean lespedeza.
Lespedeza striata (Thunb.) Hook. and Arn.—Common and Kobe lespedeza.
Linum usitatissimum L.—Flax.
Lolium multiflorum Lam.—Italian ryegrass.
Lolium perenne L.—Perennial ryegrass.
Medicago arabica (L.) All.—Bur-clover.
Medicago hispida Gaertn.—Bur-clover.
Medicago lupulina L.—Black medick.
Medicago sativa L.—Alfalfa.
Melilotus alba Desr.—White sweetclover.
Melilotus indica (L.) All.—Sourclover.
Melilotus officinalis (L.) Lam.—Yellow sweetclover.
Melinis minutiflora Beauv.—Molasses grass.
Oryza sativa L.—Rice.
Panicum fasciculatum Swartz.—Browntop millet.
Panicum miliaceum L.—Proso.
Paspalum dilatatum Poir.—Dallis grass.
Paspalum notatum Fluegge.—Bahia grass.
Pennisetum glaucum (L.) R. Br.—Pearl millet.
Pennisetum purpureum Schumach.—Napier grass.
Phleum pratense L.—Timothy.
Phalaris arundinacea L.—Reed canary grass.
Pisum sativum arvense L. (Poir.).—Field pea, Austrian winter pea.
Poa annua L.—Annual bluegrass.
Poa compressa L.—Canada bluegrass.
Poa nemoralis L.—Wood bluegrass.
Poa pratensis L.—Kentucky bluegrass.
Poa trivialis L.—Rough bluegrass.
Secale cereale L.—Rye.
Setaria italica (L.) Beauv.—Foxtail, German, Hungarian, or golden millet
Soja max (L.) Piper.—Soybean.
Sorghum vulgare Pers.—Sorghum.
Sorghum vulgare sudanense (Piper) Hitchc.—Sudan grass.
Stizolobium utile (Wall.) Piper and Tracy.—Velvetbean.
Trifolium dubium Sibth.—Suckling clover.
Trifolium hybridum L.—Alsike clover.
Trifolium incarnatum L.—Crimson clover.
Trifolium pratense L.—Red clover.
Trifolium repens L.—White clover.
Triticum spp.—Wheat; spelt; emmer.
Vicia angustifolia (L.) Reich.—Narrowleaf vetch.
Vicia atropurpurea Desf.—Purple vetch.
Vicia dasycarpa Ten.—Woollypod vetch.
Vicia monantha Desf.—Monantha vetch.
Vicia pannonica Crantz.—Hungarian vetch.
Vicia sativa L.—Common vetch.
Vicia villosa Roth.—Hairy vetch.
Vigna sinensis (Torner) Savi.—Cowpea.
Zea mays L.—Field corn:

Provided, That the Secretary of Agriculture is authorized by rules and regulations to add to or take from such list of agricultural seed, when he finds that any seeds are or are not used for seeding purposes in the United States.

(B) "Vegetable seeds" shall include the seeds of those crops that are or may be grown in gardens or on truck farms and are or may be generally known and sold under the name of vegetable seeds.

(8) (A) For the purpose of title II, the term "weed seeds" means the seeds or bulblets of plants recognized as weeds either by the law or rules and regulations of—

(i) The State into which the seed is offered for transportation, or transported; or

(ii) Alaska, Hawaii, Puerto Rico, or District of Columbia into which transported, or District of Columbia in which sold.

(B) For the purpose of title III, the term "weed seeds" means seeds or bulblets of plants which are found by the Secretary of Agriculture to be detrimental to the agricultural interests of the United States, or any part thereof.

(9) (A) For the purpose of title II, the term "noxious-weed seeds" means the seeds or bulblets of plants recognized as noxious—

(i) by the law or rules and regulations of the State into which the seed is offered for transportation, or transported;

(ii) by the law or rules and regulations of Alaska, Hawaii, Puerto Rico, or the District of Columbia, into which transported, or District of Columbia in which sold; or

(iii) by the rules and regulations of the Secretary of Agriculture under this Act, when after investigation he shall determine that a weed is noxious in the United States or in any specifically designated area thereof.

(B) For the purpose of title III, the term "noxious-weed seeds" means the seeds of *Lepidium draba* L., *Lepidium repens* (Schrenk) Boiss, *Hymenophyllum pubescens* C. A. Mey., white top; *Cirsium arvense* (L.) Scop., Canada thistle; *Cuscuta* spp., dodder; *Agropyron repens* (L.) Beauv., quackgrass; *Sorghum halepense* (L.) Pers., Johnson grass; *Convolvulus arvensis* L., bindweed; *Centaura picris* Pall., Russian knapweed; *Sonchus arvensis* L., perennial sow thistle; *Euphorbia esula* L., leafy spurge; and seeds or bulblets of any other kinds which after investigation the Secretary of Agriculture finds should be included.

(10) The term "origin" means the State, Alaska, District of Columbia, Hawaii, Puerto Rico, or possession of the United States, or the foreign country, or designated portion thereof, where the seed was grown.

(11) The term "kind" means one or more related species or sub-species which singly or collectively is known by one common name, for example, wheat, oat, vetch, sweetclover, cabbage, cauliflower, and so forth.

(12) The term "variety" means a subdivision of a kind which is characterized by growth, plant, fruit, seed, or other characters by which it can be differentiated from other sorts of the same kind, for example, Marquis Wheat, Flat Dutch cabbage, Manchu soybeans, Oxheart carrot, and so forth.

(13) The term "type" means either (A) a group of varieties so nearly similar that the individual varieties cannot be clearly differentiated except under special conditions, or (B) when used with a variety name means seed of the variety named which may be mixed with seed of other varieties of the same kind and of similar character, the manner of and the circumstances connected with the use of the designation to be governed by rules and regulations prescribed under section 402 of this Act.

(14) The term "germination" means the percentage of seeds capable of producing normal seedlings under ordinarily favorable conditions (not including seeds which produce weak, malformed, or obviously abnormal sprouts), determined by methods prescribed under section 403 of this Act.

(15) The term "hard seeds" means the percentage of seeds which because of hardness or impermeability do not absorb moisture or germinate under prescribed tests but remain hard during the period prescribed for germination of the kind of seed concerned, determined by methods prescribed under section 403 of this Act.

(16) The term "inert matter" means all matter not seeds, and includes among others broken seeds, sterile florets, chaff, fungus bodies, and stones, determined by methods prescribed under section 403 of this Act.

(17) The term "pure live seed" for the purpose of title III means that portion of any lot of seed subject to this Act that consists of live agricultural or vegetable seed determined by methods prescribed under section 403 of this Act.

(18) The term "label" means the display or displays of written, printed, or graphic matter upon or attached to the container of seed.

(19) The term "labeling" includes all labels, and other written, printed, and graphic representations, in any form whatsoever, accompanying and pertaining to any seed whether in bulk or in containers, and includes invoices.

(20) The term "advertisement" means all representations, other than those on the label, disseminated in any manner or by any means, relating to seed within the scope of this Act.

(21) Subject to such tolerances as the Secretary of Agriculture is authorized to prescribe under the provisions of this Act—

(A) the term "false labeling" means any labeling which is false or misleading in any particular;

(B) the term "false advertisement" means any advertisement which is false or misleading in any particular.

(22) The term "screenings" shall include chaff, sterile florets, immature seed, weed seed, inert matter, and any other materials removed in any way from any seeds in any kind of cleaning or processing and which contain less than 25 per centum of live agricultural or vegetable seeds.

(23) The term "in bulk" refers to seed when loose either in vehicles of transportation or in storage, and not to seed in bags or other containers.

TITLE II—INTERSTATE COMMERCE

PROHIBITIONS RELATING TO INTERSTATE COMMERCE IN CERTAIN SEEDS

SEC. 201. It shall be unlawful for any person to transport or deliver for transportation in interstate commerce—

(a) Any agricultural seeds or any mixture of agricultural seeds for seeding purposes, unless each container bears a label giving the following information in accordance with rules and regulations prescribed under section 402 of this Act:

(1) The name of (A) kind, or (B) kind and variety, or (C) kind and type, for each agricultural seed component present in excess of 5 per centum of the whole and the percentage by weight of each: *Provided*, That such components are expressed in accordance with the category designated under (A), (B), or (C);

(2) Lot number or other identification;

(3) Origin, stated in accordance with paragraph (a) (1) of this section, of each agricultural seed present which has been designated by the Secretary of Agriculture as one on which a knowledge of the origin is important from the standpoint of crop production, if the origin is known, and if each such seed is present in excess of 5 per centum. If the origin of such agricultural seed or seeds is unknown, that fact shall be stated;

(4) Percentage by weight of weed seeds, including noxious-weed seeds;

(5) Kinds of noxious-weed seeds and the rate of occurrence of each, which rate shall be expressed in accordance with and shall not exceed the rate allowed for shipment, movement, or sale of such noxious-weed seeds by the law and regulations of the State into which the seed is offered for transportation or transported or in accordance with the rules and regulations of the Secretary of Agriculture, when under the provisions of section 101 (a) (9) (A) (iii) he shall determine that weeds other than those designated by State requirements are noxious;

(6) Percentage by weight of agricultural seeds other than those included under paragraph (a) (1) of this section;

(7) Percentage by weight of inert matter;

(8) For each agricultural seed, in excess of 5 per centum of the whole, stated in accordance with paragraph (a) (1) of this section, (A) percentage of germination, exclusive of hard seed, (B) percentage of hard seed, if present, (C) the calendar month and year the test was completed to determine such percentages;

(9) Name and address of (A) the person who transports, or delivers for transportation, said seed in interstate commerce, or (B) the person to whom the seed is sold or shipped for resale, together with a code designation approved by the Secretary of Agriculture under rules and regulations prescribed under section 402 of this Act, indicating the person who transports or delivers for transportation said seed in interstate commerce;

(b) Any vegetable seeds, for seeding purposes, in containers, unless each container bears a label giving the following information in accordance with rules and regulations prescribed under section 402 of this Act;

(1) Name of kind and variety of seed;

(2) For seeds which germinate less than the standard last established by the Secretary of Agriculture, as provided under section 403 (c) of this Act—

(i) percentage of germination, exclusive of hard seed;

(ii) percentage of hard seed, if present;

(iii) the calendar month and year the test was completed to determine such percentages;

- (iv) the words "Below Standard"; and
- (3) Name and address of—
 - (A) The person who transports, or delivers for transportation, said seed in interstate commerce; or
 - (B) the person to whom the seed is sold or shipped for resale, together with a code designation approved by the Secretary of Agriculture under rules and regulations prescribed under section 402 of this Act, indicating the person who transports or delivers for transportation said seed in interstate commerce.
- (c) Any agricultural or vegetable seed unless the test to determine the percentage of germination required by this section shall have been completed within a five-month period, exclusive of the calendar month in which the test was completed, immediately prior to transportation or delivery for transportation in interstate commerce: *Provided, however,* That the Secretary of Agriculture may by rules and regulations designate: (a) a shorter period for kinds of agricultural or vegetable seed which he finds under ordinary conditions of handling will not maintain during the aforesaid five-month period, a germination within the established limits of tolerance; or (b) a longer period not to exceed nine months, exclusive of the calendar month in which the test was completed, for kinds of agricultural or vegetable seed which he finds under ordinary conditions of handling will maintain during such longer period a germination within the established limits of tolerance.
- (d) Any agricultural seeds or vegetable seeds having a false labeling, or pertaining to which there has been a false advertisement, or to sell or offer for sale such seed for interstate shipment by himself or others.
- (e) Seed which is required to be stained under the provisions of this Act and the regulations made and promulgated thereunder, and is not so stained.
- (f) Seed which has been stained to resemble seed stained in accordance with the provisions of this Act and the regulations made and promulgated thereunder.
- (g) Seed which is a mixture of seeds which are required to be stained or which are stained with different colors under the provisions of this Act and of the regulations made and promulgated thereunder, or which is a mixture of any seed required to be stained under the provisions of this Act and of the regulations made and promulgated thereunder, with seed of the same kind produced in the United States.
- (h) Screenings of any seed subject to this Act, unless they are not intended for seeding purposes; and it is stated on the label, if in containers, or on the invoice, if in bulk, that they are intended for cleaning, processing, or manufacturing purposes, and not for seeding purposes.

RECORDS

SEC. 202. All persons transporting, or delivering for transportation, in interstate commerce agricultural seeds shall keep for a period of three years a complete record of origin, germination, and purity of each lot of agricultural seed offered, and the Secretary of Agriculture, or his duly authorized agents, shall have the right to inspect such records for the purpose of the effective administration of this Act.

EXEMPTIONS

SEC. 203. (a) The provisions of sections 201 and 202 shall not apply to any carrier in respect to any seed transported or delivered for transportation in the ordinary course of its business as a carrier: *Provided,* That such carrier is not engaged in processing or merchandising seed subject to the provisions of this Act; and such provisions shall not apply to seeds produced by any farmer on his own premises and sold by him directly to the consumer, provided such farmer is not engaged in the business of selling seeds not produced by him: *And provided further,* That such seeds produced or sold by him when transported or offered for transportation to any State, Territory, or District, shall not be exempted from the provisions of sections 201 and 202 unless said seeds shall be in compliance with the operation and effect of the laws of such State, Territory, or District, enacted in the exercise of its police power, to the same extent and in the same manner as though such seed had been produced, sold, offered or exposed for sale in such State, Territory, or District, and shall not be exempted therefrom by reason of being introduced therein in original packages or otherwise: *And provided further,* That such seeds produced or sold by him are in compliance with the seed laws of the State into which the seed is transported.

(b) The provisions of section 201 (a) or (b) shall not apply—

- (1) to seed or grain not intended for seeding purposes when transported or offered for transportation in ordinary channels of commerce usual for such seed or grain intended for manufacture or for feeding; or
- (2) to seed intended for seeding purposes when transported or offered for transportation in interstate commerce—
 - (A) if in bulk, in which case, however, the invoice pertaining to such seed shall bear the various statements required for the respective seeds under section 201 (a) and (b); or
 - (B) if consigned to a seed cleaning or processing establishment, to be cleaned or processed for seeding purposes: *Provided*, That this fact is so stated in the invoice, if in bulk, or on attached labels, if in containers: *Provided further*, That any such seed later to be labeled as to origin and/or variety, and for which consecutive records are necessary to establish these facts, shall be labeled as to these items in accordance with rules and regulations prescribed under section 402 of this Act.

(c) When the Secretary of Agriculture finds that, because of the time interval between seed harvesting and sowing, or because of an emergency beyond human control, the information required by this Act as to the germination, and hard seed of certain kinds of seeds, cannot be given prior to transportation or delivery for transportation in interstate commerce, he may promulgate, with or without a hearing, rules and regulations providing that the provisions of section 201 (a) and (b) as to the required labeling for germination and hard seed shall not apply for such period and to such kinds of seed as he may specify in his said rules and regulations.

(d) The provisions of section 201 (a) and (b) relative to the labeling of agricultural and vegetable seeds with the percentages of the kind or variety or type of seeds shall not be deemed violated if there be other seeds in the container or bulk which could not be, or were not, identified because of their indistinguishability in appearance from the seeds intended to be transported or delivered for transportation in interstate commerce, provided that the records of the person charged with the duty under said section of labeling or invoicing the seeds, kept in accordance with the rules and regulations of the Secretary of Agriculture, together with other pertinent facts, disclose that said person has taken all proper precautions to insure the identity to be that stated.

DISCLAIMERS AND NONWARRANTIES

SEC. 204. The use of a disclaimer or nonwarranty clause in any invoice, advertising, labeling, or written, printed, or graphic matter, pertaining to any seed shall not constitute a defense, or be used as a defense in any way, in any prosecution, or in any proceeding for confiscation of seeds, brought under the provisions of this Act, or the rules and regulations made and promulgated thereunder.

FALSE ADVERTISING

SEC. 205. It shall be unlawful for any person to disseminate, or cause to be disseminated, any false advertisement concerning seed, by the United States mails, or in interstate or foreign commerce, in any manner or by any means, including radio broadcasts: *Provided, however*, That no person, advertising agency, or medium for the dissemination of advertising, except the person who transported, delivered for transportation, sold, or offered for sale, seed to which the false advertisement relates, shall be liable under this section by reason of disseminating or causing to be disseminated any false advertisement, unless he or it has refused, on the request of the Secretary of Agriculture, to furnish the Secretary the name and post-office address of the person, or advertising agency, residing in the United States, who caused, directly or indirectly, the dissemination of such advertisement.

TITLE III—FOREIGN COMMERCE

PROHIBITIONS AND PROCEDURES RELATING TO IMPORTATIONS

SEC. 301. (a) The importation into the United States is prohibited of—

- (1) any seed containing 10 per centum or more of any agricultural or vegetable seeds if any such seed is adulterated or unfit for seeding purposes,

or is required to be stained and if not so stained, under the terms of this title, or the labeling of which is false or misleading in any respect:

(2) screenings of any seeds subject to title III of this Act (except that this shall not apply to screenings of wheat, oats, rye, barley, buckwheat, field corn, sorghum, broomcorn, flax, millet, proso, soybeans, cowpeas, field peas, or field beans, which are not imported for seeding purposes and are declared for cleaning, processing, or manufacturing purposes, and not for seeding purposes);

(3) any seed containing 10 per centum or more of the seeds of alfalfa or red clover, which has been stained prior to being offered for entry in a manner that does not permit compliance with the provisions of this title and the regulations made and promulgated thereunder.

SEC. 302. (a) The Secretary of the Treasury shall deliver to the Secretary of Agriculture, subject to joint rules and regulations prescribed under section 402 of this Act, samples of seed and screenings which are being imported into the United States, or offered for import, giving notice thereof to the consignee, and if it appears from the examination of such samples that any seed or screenings offered to be imported into the United States are subject to the provisions of this title and do not comply with the provisions of this title, or if the labeling of such seed is false or misleading in any respect, such seed or screenings shall be refused admission, and the Secretary of the Treasury shall refuse delivery to the consignee, who may appear, however, before the Secretary of Agriculture and show cause why the seed or screenings should be admitted. Seed or screenings refused admission and not exported by the consignee within twelve months from the date of notice of such refusal shall be destroyed in accordance with joint rules and regulations prescribed under section 402 of this Act: *Provided*, That the Secretary of the Treasury may deliver to the consignee such seed or screenings pending examination and decision in the matter or for staining, if it be seed which is required to be stained, or for cleaning, on the execution of a redelivery bond for such amount as may be necessary under joint rules and regulations prescribed under section 402 of this Act, and on refusal to return such seed or screenings for any cause to the custody of the Secretary of the Treasury, when demanded, for the purpose of excluding such seed or screenings from the country, or for any other purpose, said consignee shall forfeit the full amount of the bond as liquidated damages: *And provided further*, That all charges for storage, cartage, and labor on the seed or screenings which are refused admission or delivery, shall be paid by the owner or consignee, and in default of such payment shall constitute a lien against future importation made by such owner or consignee.

(b) The refuse from any seeds or screenings which are allowed to be cleaned under bond shall be destroyed in accordance with joint rules and regulations prescribed under section 402 of this Act.

(c) The provisions of this title shall not apply—

(1) when seed is shipped in bond through the United States, or

(2) when the Secretary of Agriculture finds that a substantial proportion of the importations of any kind of seed is used for other than seeding purposes, and he provides by rules and regulations that seed of such kind not imported for seeding purposes shall be exempted from the provisions of the Act: *Provided*, That importations of such kinds of seed shall be accompanied by a declaration setting forth the use for which imported when and as required under joint rules and regulations prescribed under section 402 of this Act.

ADULTERATED SEED

SEC. 303. Seed subject to the provisions of section 301 is adulterated if any kind of such seed contains more than 5 per centum by weight of seed or seeds of another kind or kinds of similar appearance: *Provided*, That the mixture of the seed of white and alsike clover, or red clover and alsike clover, shall not be deemed to be adulterated, and that other seed mixtures of similar kinds of seeds of similar appearance, shall not be deemed to be adulterated when the Secretary of Agriculture finds and prescribes by order that the importation of such seed mixtures for planting is not detrimental to the user of such seeds.

SEED UNFIT FOR SEEDING PURPOSES

SEC. 304. Seed subject to the provisions of section 301 is unfit for seeding purposes—

- (a) If any such seed contains noxious-weed seed at a rate in excess of—
 - (1) one noxious-weed seed in each ten grams of the seed of timothy, orchard grass, bromegrass, crested wheatgrass, slender wheatgrass, ryegrass, sweetclover, alfalfa, millet, rape, flax, clovers, and species of *Agrostis*, *Festuca*, or *Poa*, or any kind of seed of a size and weight similar to or less than those named;
 - (2) one noxious-weed seed in each twenty-five grams of the seed of sorghum, Sudan grass, and buckwheat, or any kind of seed of a size and weight greater than the seeds referred to in (a) (1) but less than seeds referred to in (a) (3) of this section;
 - (3) one noxious-weed seed in each one hundred grams of the seed of wheat, oats, rye, barley, vetches, and corn, or any seed of a size and weight similar to or greater than such seed.

(b) If any such seed contains more than 2 per centum by weight of weed seeds; or

(c) If any such seed contains less than 75 per centum of pure live seed, or if any component of such seed present to the extent of 10 per centum or more contains less than 75 per centum of live seed: *Provided*, That when the Secretary of Agriculture shall find that any such seed or any kind of seed present to the extent of 10 per centum or more cannot be produced to contain 75 per centum of pure live seed, he may set up such standard from time to time for pure live seed as he finds can be produced.

CERTAIN SEEDS REQUIRED TO BE STAINED

SEC. 305. (a) Any seed containing 10 per centum or more of the seeds of alfalfa and/or red clover, subject to the provisions of section 301, shall be stained in such manner and to such extent as the Secretary of Agriculture by regulation may prescribe and, when practicable, the color produced by such stain shall indicate the country or region of origin.

(b) Whenever the Secretary of Agriculture, after public hearing, determines that seed of alfalfa or red clover from any foreign country or region is not adapted for general agricultural use in the United States, he shall publish such determination. On and after the expiration of ninety days after the date of such publication, and until such determination is revoked, 10 per centum or more of the seeds in each container of such alfalfa or red clover seed, or any seed containing 10 per centum or more of such alfalfa or red clover seed, shall be stained a red color, in accordance with such regulations as the Secretary of Agriculture may prescribe.

(c) Whenever the origin of the seed of alfalfa or of red clover present in excess of 10 per centum in any seed subject to section 301 of this Act is unestablished, 10 per centum of the seed in each container shall be stained a red color.

(d) Whenever the seeds of alfalfa or of red clover of different origins are present in excess of 10 per centum in any seed subject to section 301 of this Act, and different colors are required by reason of such different origins, 10 per centum of the seed in each container shall be stained red.

(e) Whenever any seed required to be stained under the provisions of this Act is commingled with seed of the same kind grown in the United States, the seed in each container thereof shall be stained 10 per centum red.

CERTAIN ACTS PROHIBITED

SEC. 306. It shall be unlawful for any person—

(a) To sell or offer for sale—

- (1) any seed for seeding purposes if imported under this title for other than seeding purposes;
- (2) any screenings of any seeds for seeding purposes if imported under this title for other than seeding purposes;
- (3) any seed which is prohibited entry under the provisions of this Act;
- (4) any seed which has been stained to resemble seed stained in accordance with the provisions of this Act and the rules and regulations made and promulgated thereunder;
- (5) any seed stained under the provisions of this Act and the rules and

regulations made and promulgated thereunder, when mixed with seed of the same kind produced in the United States;

(6) any seed stained with different colors;

(7) any seed stained under the provisions of this Act, the labeling of which states that such seed is adapted.

(b) To change the proportion of seeds stained under the provisions of this Act and the rules and regulations made and promulgated thereunder, or to alter, modify, conceal, or remove in any manner or by any means the color of such stained seeds.

TITLE IV—GENERAL PROVISIONS

DELEGATION OF DUTIES

SEC. 401. Any duties devolving upon the Secretary of Agriculture by virtue of the provisions of this Act may with like force and effect be executed by such officer or officers, agent or agents, of the Department of Agriculture as the Secretary may designate for the purpose.

RULES AND REGULATIONS

SEC. 402. (a) The Secretary of Agriculture shall make such rules and regulations as he may deem necessary for the effective enforcement of this Act, except as otherwise provided in this section.

(b) The Secretary of the Treasury and the Secretary of Agriculture shall make, jointly or severally, such rules and regulations as they may deem necessary for the effective enforcement of title III of this Act.

(c) Prior to the promulgation of any rule or regulation under this Act, due notice shall be given by publication in the Federal Register of intention to promulgate and the time and place of a public hearing to be held with reference thereto, and no rule or regulation may be promulgated until after such hearing. Any rule or regulation shall become effective on the date fixed in the promulgation, which date shall be not less than thirty days after publication in the Federal Register, and may be amended or revoked in the manner provided for its promulgation.

STANDARDS, TESTS, AND TOLERANCES

SEC. 403. (a) The samplings, analyses, tests, or examinations of seeds made in connection with the administration of this Act shall be made by methods set forth by rules and regulations prescribed under section 402 of this Act.

(b) The Secretary of Agriculture is authorized and directed to make and promulgate by rules and regulations, reasonable tolerances as to the percentages and rates of occurrence required to be stated or required by this Act.

(c) For the purpose of section 201 (b) of this Act, the Secretary of Agriculture is authorized and directed to investigate, determine, establish, and promulgate from time to time such reasonable standards of germination for each kind of vegetable seed as will in his judgment best protect crop production.

PROHIBITION AGAINST ALTERATIONS

SEC. 404. No person shall detach, alter, deface, or destroy any label provided for in this Act or the rules and regulations made and promulgated thereunder by the Secretary of Agriculture, or alter or substitute seed in a manner that may defeat the purpose of this Act.

SEIZURE

SEC. 405. (a) Any seed sold, delivered for transportation in interstate commerce, or transported in interstate or foreign commerce in violation of any of the provisions of this Act shall, at the time of such violation or at any time thereafter, be liable to be proceeded against on libel of information and condemned in any district court of the United States within the jurisdiction of which the seed is found.

(b) If seed is condemned by a decree of the court as being in violation of the provisions of this Act, it may be disposed of by the court by—

(1) sale; or

(2) delivery to the owner thereof after he has appeared as claimant and paid the court costs and fees and storage and other proper expenses and

executed and delivered a bond with good and sufficient sureties that such seed will not be sold or disposed of in any jurisdiction contrary to the provisions of this Act and the rules and regulations made and promulgated thereunder, or the laws of such jurisdiction; or

(3) destruction.

(c) If such seed is disposed of by sale, the proceeds of the sale, less the court costs and fees and storage and other proper expenses, shall be paid into the Treasury as miscellaneous receipts, but such seed shall not be sold or disposed of in any jurisdiction contrary to the provisions of this Act and the rules and regulations made and promulgated thereunder, or the laws of such jurisdiction.

(d) The proceedings in such libel cases shall conform, as nearly as may be, to the proceedings in admiralty, except that either party may demand trial by jury of any issue of fact joined in any such case; and such proceedings shall be at the suit of and in the name of the United States.

PENALTIES

SEC. 406. Any person who violates any provision of this Act or the rules and regulations made and promulgated thereunder shall be deemed guilty of a misdemeanor and, upon conviction thereof, shall pay a fine of not more than \$1,000, for the first offense, and upon conviction for each subsequent offense not more than \$2,000.

SEC. 407. When construing and enforcing the provisions of this Act, the act, omission, or failure of any officer, agent, or other person acting for or employed by any person, partnership, corporation, company, society, or association, shall in every case be also deemed to be the act, omission, or failure of such person, partnership, corporation, company, society, or association, as well as that of the person employed.

SEC. 408. Before any violation of this Act is reported by the Secretary of Agriculture to any United States attorney for institution of a criminal proceeding, the person against whom such proceeding is contemplated shall be given appropriate notice and an opportunity to present his views, either orally or in writing, with regard to such contemplated proceeding.

CEASE AND DESIST PROCEEDINGS

SEC. 409 (a) Whenever the Secretary of Agriculture has reason to believe that any person has violated or is violating any of the provisions of this Act or the rules and regulations made and promulgated thereunder, he shall cause a complaint in writing to be served upon the person, stating his charges in that respect, and requiring the person to attend and testify at a hearing at a time and place designated therein, at least thirty days after the service of such complaint; and at such time and place there shall be afforded the person a reasonable opportunity to be informed as to the evidence introduced against him (including the right of cross-examination), and to be heard in person or by counsel and through witnesses, under such rules and regulations as the Secretary of Agriculture may prescribe. At any time prior to the close of the hearing the Secretary of Agriculture may amend the complaint; but in case of any amendment adding new provisions the hearing shall, on the request of the person, be adjourned for a period not exceeding fifteen days.

(b) If, after such hearing, the Secretary of Agriculture finds that the person has violated or is violating any provisions of the Act or rules and regulations covered by the charges, he shall make a report in writing in which he shall state his findings as to the facts, and shall issue and cause to be served on the person an order requiring such person to cease and desist from continuing such violation. The testimony taken at the hearing shall be reduced to writing and filed in the records of the Department of Agriculture.

(c) Until a transcript of the record in such hearing has been filed in a circuit court of appeals, as provided in section 410, the Secretary of Agriculture at any time, upon such notice and in such manner as he deems proper, but only after reasonable opportunity to the person to be heard, may amend or set aside the report or order, in whole or in part.

(d) Complaints, orders, and other processes of the Secretary of Agriculture under this section may be served by anyone duly authorized by the Secretary of Agriculture, either (1) by delivering a copy thereof to the person to be served, or to a member of the partnership to be served, or to the president, secretary, or other executive officer or a director of the corporation to be served; or (2) by

leaving a copy thereof at the principal office or place of business of such person, partnership, or corporation; or (3) by registering and mailing a copy thereof addressed to such person, partnership, or corporation at his or its last known principal office or place of business. The verified return by the person so serving said complaint, order, or other process setting forth the manner of said order shall be proof of the same, and the return post-office receipt for said complaint, order, or other process registered and mailed, as aforesaid shall be proof of the service of the same.

SEC. 410. An order made under section 409 shall be final and conclusive unless within thirty days after the service the person appeals to the circuit court of appeals for the circuit in which such person resides or has his principal place of business by filing with the clerk of such court a written petition praying that the Secretary's order be set aside or modified in the manner stated in the petition, together with a bond in such sum as the court may determine, conditioned that such person will pay the costs of the proceedings if the court so directs.

The clerk of the court shall immediately cause a copy of the petition to be delivered to the Secretary, and the Secretary shall forthwith prepare, certify, and file in the court a full and accurate transcript of the record in such proceedings, including the complaint, the evidence, and the report and order. If before such transcript is filed, the Secretary amends or sets aside his report or order, in whole or in part, the petitioner may amend the petition within such time as the court may determine, on notice to the Secretary.

At any time after such transcript is filed the court, on application of the Secretary, may issue a temporary injunction restraining, to the extent it deems proper, the person and his officers, directors, agents, and employees from violating any of the provisions of the order pending the final determination of the appeal.

The evidence so taken or admitted, duly certified and filed as aforesaid as a part of the record, shall be considered by the court as the evidence in the case. The proceedings in such cases in the circuit court of appeals shall be made a preferred cause and shall be expedited in every way.

The court may affirm, modify, or set aside the order of the Secretary.

If the court determines that the just and proper disposition of the case requires the taking of additional evidence, the court shall order the hearing to be reopened for the taking of such evidence in such manner and upon such terms and conditions as the court may deem proper. The Secretary may modify his findings as to the facts, or make new findings, by reason of the additional evidence so taken, and he shall file such modified or new findings and his recommendations, if any, for the modification or setting aside of his order, with the return of such additional evidence.

If the circuit court of appeals affirms or modifies the order of the Secretary, its decree shall operate as an injunction to restrain the person and his officers, directors, agents, and employees from violating the provisions of such order or such order as modified.

SEC. 411. If any person against whom an order is issued under section 409 fails to obey the order, the Secretary of Agriculture, or the United States, by its Attorney General, may apply to the circuit court of appeals of the United States, within the circuit where the person against whom the order was issued resides or has his principal place of business, for the enforcement of the order, and shall certify and file with its application a full and accurate transcript of the record in such proceedings, including the complaint, the evidence, the report, and the order. Upon such filing of the application and transcript the court shall cause notice thereof to be served upon the person against whom the order was issued. The evidence to be considered, the procedure to be followed, and the jurisdiction of the court shall be the same as provided in section 410 for applications to set aside or modify orders.

The proceedings in such cases shall be made a preferred cause and shall be expedited in every way.

SEPARABILITY OF PROCEEDINGS

SEC. 412. The institution of any one of the proceedings provided for in sections 405, 409, 410, and 411, or criminal prosecution under section 406 shall not bar institution of any of the others. However, nothing in this Act shall be construed as requiring the Secretary of Agriculture to recommend prosecution or institution of libel proceedings, cease and desist proceedings or proceedings for the enforcement of a cease and desist order, for minor violations of this Act whenever

he believes that the public interest will be adequately served by suitable written notice or warning.

SEC. 413. (a) In carrying on the work herein authorized, the Secretary of Agriculture, or any officer or employee designated by him for such purpose, shall have power to hold hearings, administer oaths, sign and issue subpenas, examine witnesses, take depositions, and require the production of books, records, accounts, memoranda, and papers, and have access to office and warehouse premises. Upon refusal by any person to appear, testify, or produce pertinent books, records, accounts, memoranda, and papers in response to a subpena, or to permit access to premises, the proper United States district court shall have power to compel obedience thereto.

(b) Witnesses summoned before the Secretary or any officer or employee designated by him shall be paid the same fees and mileage that are paid witnesses in the courts of the United States, and witnesses whose depositions are taken and the persons taking the same shall severally be entitled to the same fees as are paid for like service in the courts of the United States.

PUBLICATION

SEC. 414. After judgment by the court, or the issuance of a cease and desist order, in any case arising under this Act, notice thereof shall be given by publication in such manner as may be prescribed in the rules and regulations made and promulgated under this Act.

AUTHORIZATION FOR APPROPRIATIONS

SEC. 415. (a) There is hereby authorized to be appropriated, out of any money in the Treasury not otherwise appropriated, such sums as may be necessary for administering this Act.

(b) Funds appropriated for carrying into effect the purpose of this Act shall be available for allotment by the Secretary of Agriculture to the bureaus and offices of the Department of Agriculture and for transfer to other departments and agencies of the Government which the Secretary of Agriculture may call upon to assist or cooperate in carrying out such purposes or for services rendered or to be rendered in connection therewith.

AUTHORIZATION FOR EXPENDITURES

SEC. 416. The Secretary of Agriculture is authorized to make such expenditures for rent, outside of the District of Columbia, printing, binding, telegrams, telephones, books of reference, publications, furniture, stationery, office and laboratory equipment, travel and other supplies, including reporting services, such research necessary to develop methods of processing, bulking, blending, sampling, testing, and merchandising seeds necessary to the administration of this Act and other necessary expenses in the District of Columbia and elsewhere, and as may be appropriated for by the Congress.

COOPERATION

SEC. 417. The Secretary of Agriculture is authorized to cooperate with any other department or agency of the Federal Government; or with any State, Territory, District, or possession, or department, agency, or political subdivision thereof; or with any producing, trading, or consuming organization, whether operating in one or more jurisdictions, in carrying out the provisions of this Act.

SEPARABILITY OF PROVISIONS

SEC. 418. If any provisions of this Act, or the application thereof to any person or circumstance, is held invalid, the remainder of the Act, and the application of such provisions to other persons or circumstances, shall not be affected thereby.

REPEALS

SEC. 419. The Importation of Adulterated Seeds Act, approved August 24, 1912, as amended August 11, 1916, and as amended April 26, 1926 (7 U. S. C., 111-116, inclusive), is hereby repealed on the one hundred and eightieth day after the

passage of this Act: *Provided, however,* That the notices with respect to imported alfalfa and red clover seed promulgated by the Secretary of Agriculture under the authority of the Importation of Adulterated Seeds Act, approved August 24, 1912, as amended (7 U. S. C., 111-116, inclusive), and now in effect, shall remain with the same full force and effect as if promulgated under this Act.

EFFECTIVE DATE

SEC. 420. This Act shall take effect as follows: As to agricultural seeds, and the importation of vegetable seeds, on the one hundred and eightieth day after its enactment; as to vegetable seeds in interstate commerce, one year after its enactment; and as to sections 401, 402, and 403, on the date of its enactment.

Approved, August 9, 1939.

